

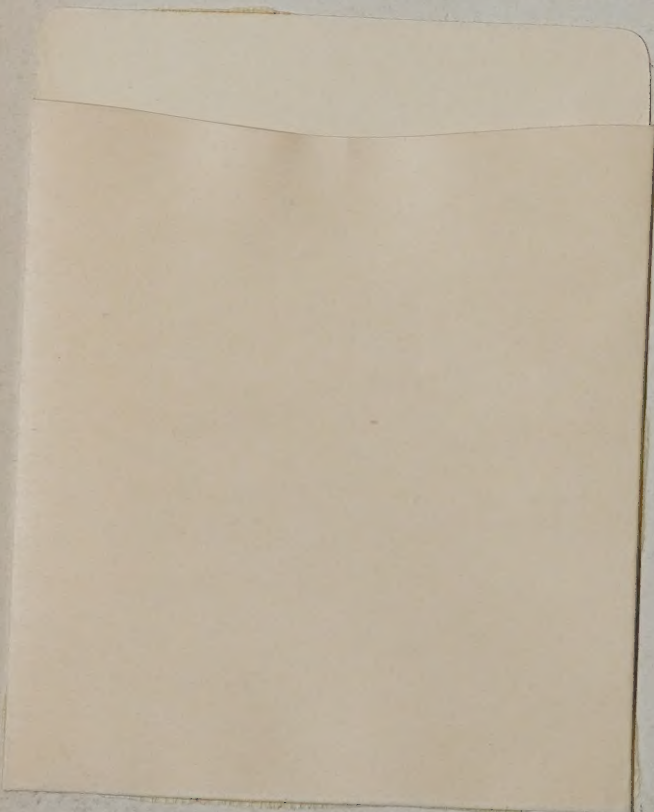




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THE  
ARCHITECT.

A WEEKLY

ILLUSTRATED JOURNAL

OF

ART,

CIVIL ENGINEERING,

AND

BUILDING.

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*"Of all the Fine Arts, Architecture is the one which appears most likely to attain great and deserved eminence in these regions."*—SIR A. ALISON.

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# THE ARCHITECT

## A JOURNAL OF ART, CIVIL ENGINEERING, AND BUILDING

### THE ARTISTIC EVOLUTION OF ARCHITECTURE.



At the opening of a new year it may be not inappropriate to take a glance at our great master-art of architecture, if only in humble recognition of the scientific spirit of the age, as an enterprise of human intellect which has reached a point of development far from the beginning, and why not still farther from the end? The indomitable perseverance of physical research, within the personal recollection of men of five-and-forty, has been, as it were, unearthing the very arcana of nature's creative operations, and with a

success which, to many of the most estimable amongst us, seems not only bewildering, but alarming; until at length, by the necromancy of inductive demonstration, the very well-springs of society, with all its diverse customs, laws, moralities, myths, traditions of hope and fear, its histories of peace and war, its arts and sciences, its liberties, slaveries, ascendancies, authorities, its good and evil of every kind, are threatened with intimate discovery, and the elements of responsibility itself with reduction *secundum artem* to first principles of necessity as the simplest rule of law. In such circumstances it may be said to be only a question of time when we shall be able, in speaking of the magnificent historic fine-art of building, to make use of forms of expression which shall no longer loosely describe superficialities, the mere morphology of phenomena, but with scientific precision indicate the actual bases of principle and the causes and effects of fancy. The evolution or engenderment of architectural design, that is to say, must obviously, amongst the rest, become the subject of philosophic inquiry in its turn; and already we may be said to be waiting impatiently for the hour and the man.

The accomplished and eloquent President of the Royal Academy, in addressing the students some three or four weeks ago,\* accepted the occasion to offer a remarkably graceful and able statement suggestive of the line of argument which will be brought to bear upon the case when the time comes. "Art, in relation to Time, Place, and Race," was the title which Sir FREDERICK LEIGHTON adopted for his discourse; and it proved that his philosophical instinct was on the right track when he, although a painter, and a philosophical painter, found himself so much under the necessity of relying upon the architectural productions of the early ages of civilisation for the illustration of his argument. He could not help perceiving that, in the early youth of human culture, it was in magnificent building that the vigour of the artistic sentiment first discovered its powers; and when he called upon his audience to contrast the architectural remains of old Egypt and old Greece, as their first experiment in the discovery of the drift, if no more, of artistic evolution, he felt that, in their inception, all other systematic arts must own themselves to have been very small when architecture was very great, and to have been indeed things of the future when building, most colossal and most majestic, was already a thing of the past.

Sir FREDERICK LEIGHTON well said that it was impossible for him to overtake more than "a mere fragment" of his subject; we in our turn must acknowledge that we are equally unable to touch upon more than a mere fragment of his discourse. What he calls "Time, Place, and Race" covers more ground in philosophic prospect than we could attempt just now to indicate, if only in the language of speculation; and too many adventitious elements to be even vaguely catalogued in the space at our command, or, we are free to confess, by the knowledge at our disposal. But one incident that must have forcibly attracted the notice of most of the hearers and readers of the President's thoughtful lecture is so well worthy of further consideration, that even in this most cursory way we may take leave to dwell upon it as a singularly cogent illustration of the manner in which the mysterious sentiments of the mind of a people act directly upon the material aspect of their handiwork. We refer to the contrast which was so lightly touched, and yet so effectively defined, between the devotion of the Egyptian mind to the contemplation of the melancholy repose of death, and the occupation of the bright Hellenic intellect in the appreciation of the grace and vigour of life. It does not require any great effort of imagination to perceive how important the consequences of so radical a divergence of thought would be. Nor is it difficult to discern the corresponding difference between two equally prominent historical forms of intellectual development at a much later period of history, namely, the Christianity of the Middle Ages and the Scepticism of the Renaissance. If, as HERODOTUS records the fact, the Egyptians were "religious far beyond any other race of men," the Western Nations of Mediæval times, we may surely say, were religious beyond the Egyptians. And if in the time of ARISTOPHANES (it may have been but a pardonable artifice of rhetoric when PAUL THE APOSTLE reminded the Athenians a few generations afterwards that "in all things they were very devout") the bright Hellenes were as mercurial as their great precursors had been grave, we may very clearly see in the Italians of the Cinquecento period and the French of the whole modern time the same development of a broad and overwhelming reaction of human instinct, under the same law, although yet undiscovered, of artistic evolution.

But we must confine our attention in the present hasty observations to still narrower ground. To seek out the fundamental principles upon which a Titanic temple by the Nile and a little shrine on the Ilissus must necessarily differ, is more difficult than to observe how the "dim religious light," in other words the ineffable sepulchral serenity, of a Gothic cathedral, contrasts from first to last with the jubilant brilliancy of an Italian cortile. Shall we say that the constant contemplation of "death, and after death the judgment," was both the weft and the web of Mediæval art, and that even in this nineteenth century there is more than we suppose of our national artistic endeavour in England not yet emancipated from the old gloomy habitudes, and scarcely yet crossing the threshold of that entire joyousness of beauty which the old Greeks so delighted to cultivate?

The evolution or engenderment of Gothic architecture, as an example, might be a comparatively easy, if still a long, process to trace. The wreck of the Roman Empire, and the degradation of the Classic elements of both design and structure; the

\* See *The Architect* of December 15 ultimo, p. 368.



introduction of a somewhat effeminate form of Christianity, under the patronage of effete authority; the advent of northern barbarism in all its rude health of body and mind, and the corresponding change in faith and morals; the ascendancy of a vigorous and militant priesthood, the only agency by which the rampant spirit of violence and oppression could be resisted and overcome on behalf of mercy and justice; the universal domination, therefore, of religion, and the enforced allegiance of the whole mass of society to its principles of thought; the exaltation of the divine ideal to the uttermost, and of the aspirations of humanity when it followed the divine; and the whole of this rugged and yet grand drama, as it was performed, unconsciously, upon the stage of European history, unconsciously reflected in the mirror of building, generation after generation, with complete fidelity and unflinching force of expression. Then we do not forget, of course, to trace along the same line, step by step, the progress of the substantial, as distinguished from the social, elements of artistic cause and effect; and we find not only structural skill, but the application of materials and workmanship, at first declining to a low level, then struggling to recover, rising here and there with some success, in old forms and new; eventually acquiring a force and freedom of their own, and, like a strong man rejoicing as he runs a race, rejoicing in the sense of indomitable vitality and undaunted courage. So also, in the meantime, we can follow the development of the whole system of satellite arts which were now revolving around the master art of architecture; scarcely dependent upon it so much as lending it a thousand ancillary graces and playing about it with infinite joyousness. The influence of a strange and quaint traditional fraternity of workmanhood, most interesting to follow, is also said by some to have been such an element as we should have to admit into the sphere of inquiry; and there might doubtless be other considerations not to be quite overlooked, if the equivalency of components to resultants were to be rigorously insisted upon; but, throughout the entire philosophy of the matter, one thing that must account for much that would otherwise be indescribably characteristic is the radical peculiarity of thought to which we have alluded—the constant contemplation of something, not only not belonging to the surrounding world and the triumphs of life and sunshine, but throwing over all a glamour of the grave, and lauding to the skies the blessedness and the victory of death.

These suggestions, we are aware, do very slender justice to the breadth of inquiry and precision of detail which the expounder of principles would have to bring to the task of dealing effectually in the modern scientific spirit with the origin and progress of architecture; and perhaps there is no other historical period of development which would be so easy to handle as the one we have reviewed. But one observation which may at any rate be made is this—that the evolution of architecture is manifestly a process of exceedingly slow pace, the result of incidents which move slowly because of their very complexity and intricacy. The accepted history of the art, based upon its mere morphology or science of forms, in which superficial imitation is supposed to be the leading agent, and indeed an arbitrary and often capricious agent, only lies across the threshold of its true philosophy.

## A PUBLIC HEALTH EXHIBITION.

BY PROFESSOR T. ROGER SMITH.

AN exhibition in which architecture and building will play an important part is announced to be held this summer at South Kensington. We refer to the International Health Exhibition, which is to occupy the buildings put up to house the Fisheries Exhibition of last summer, and which its promoters hope may attain something of the popularity of that fortunate venture. As an introduction to any further remarks on the proposed Health Exhibition itself, we may find it instructive to glance at the circumstances to which it owes its existence.

Among the minor events of the year just closed, by no means the least remarkable was the great and, to some extent, unexpected success of the Fisheries Exhibition. Of the many displays, national and international, which have been held during the era of exhibitions, as the last thirty years deserves to be called, only a small number have accomplished results equal to the hopes of their projectors; but among them the

Fisheries Exhibition must be counted. Indeed, it is not too much to say that both in extent and popularity the display at Kensington fairly astonished its promoters. Success in the case of an exhibition may be gauged by the number of visitors, by the amount of public attention attracted, or by the sum total of the receipts. From a higher standpoint the tests are the completeness with which the subject is illustrated, the number and excellence of the novelties brought to light, and the influence which may be exerted on the development of art, industry, or commerce; and unless good results of both classes be attained the success cannot be said to be complete.

There was a good deal in the nature of the pursuits illustrated and the objects exhibited at the Fisheries, as it was familiarly termed, to account for its attractiveness, not to say fascination, for the bulk of English visitors. All the inhabitants of our vast extent of coast were of course interested in that which forms one of the special occupations in their neighbourhoods, and in which not a few of themselves were engaged; while for all inland folk there was a kind of seaside savour about the whole affair which recalled associations of holiday time, boating, bathing, fishing, and shrimping, not to speak of the very many to whom angling is a favourite relaxation, and who found that was kindred to their pursuits at Kensington; all these went prepared to be pleased, and found in the exhibition that their anticipations were not disappointed. The material objects were many of them picturesque, all of them characteristic, and as nets and boats, oars and paddles, rods and lines are all in their very nature eminently movable, they were brought together with ease in great quantities, and were to be seen in a perfectly natural arrangement.

These elements of popularity might, however, not have sufficed to secure this brilliant result, had not the architectural distribution of the *locale* been favourable. The architect and his work are of far more importance than the world—or, at any rate, the English world—is willing to admit; and, in almost every public undertaking the intelligence with which the building has been planned, or the reverse, has quite as much to do with success or failure as any of the more obvious considerations of the case.

Rather more than ten years ago exhibitions intended to be annual were begun at this very spot in South Kensington with very good prospects of success, and with the double advantage that it was proposed to unite fine art with technical. Considerable expense was gone to in the erection of galleries, and infinite pains were taken by experienced persons; but the scheme, though launched seemingly with every chance of prosperity, languished for two seasons or so and died a natural death. To nothing was this failure more directly traceable than to an architectural blunder. Sir HENRY COLE, astute though he was, and himself the child of the most successful exhibition of the century, committed the blunder, unpardonable in a man of his sagacity, of causing the galleries to be arranged round a great open space, but not opening on to it, so that nowhere could the visitors congregate. The wonder of 1851 had been the vast crowd pacing up and down the nave of that first Crystal Palace; and the real magnet which drew the multitude to Hyde Park was this very changing kaleidoscope of humanity which they crowded to gaze at, and to which each spectator unconsciously contributed a fragment. So it has been in every successful exhibition since, and the many who care more for relaxation, recreation, or excitement than for study or research, ceased to frequent Sir HENRY'S galleries as soon as they found that, though they could see the objects exhibited admirably, they saw little or nothing of one another.

From this drawback the Fisheries Exhibition was free, and though it was held in what was not much more than a series of well-built sheds, there was a capital promenade under cover, and there was a further attraction such as has not been to be had in London for many a day—a garden illuminated and provided with chairs and bands of music, and offering on those evenings when our uncertain climate permitted such amusements, an *al fresco* lounge that recalled something of the cheerful sociability of French or Italian cities.

It is now desired to take advantage of this fresh departure, and a short series of subjects, at once popular and important, has been arranged. First on the list stands public health, and this is to be illustrated in the present year. Public health does not mean simply drainage, and of this the framers of the programme seem to be aware, for though a very large number of subjects connected with what is commonly called



sanitation are mentioned, others are included which belong to hygiene, considered in its broadest and truest sense, as the source of healthy human life. As much of our life, especially much of modern life, is spent in buildings, the influence of the building upon those who inhabit it, work in it, or are taught and teach in it, has rightly been included, though probably hardly so much prominence has been given to it as its paramount importance merits. The truth is that almost the whole course of our sanitary efforts hitherto has been unavoidably devoted to extricating ourselves from the disastrous consequences of a gigantic blunder. We suddenly found that modern house-drainage, as practised all but universally, was leading to deadly and fatal results, and we had first to learn what was wrong and how to right it, and then to attempt, with as yet only very partial success, to rouse public attention. But all this is only negative. A house is not necessarily healthy because there are no foul smells, and the elements from which its human occupants draw their supplies of vigour and cheerfulness are not the absence of nuisances but the presence of light, warmth, dryness, cheerfulness, comfort, and fresh air.

If the exhibition can but succeed in giving some, even the faintest echo, of the brightness of spirit enjoyed by those who are in circumstances thoroughly conducive to health, it would gain an attractive charm, far more powerful even than the sense of the picturesque, and the faint touch of something akin to romance, which we have alluded to as attaching to the display of last year. We do not see that this is too much to aim at ; but in order to reach it the architectural side of the science of health must receive its full share of attention.

Six divisions have been announced. They comprise—1, food ; 2, dress ; 3, the dwelling-house ; 4, the school ; 5, the workshop ; and 6, educational appliances. Dress and food may probably prove the most attractive parts of the display ; but our readers will be more concerned with the house, the workshop, and the school, and we trust that the undoubted advance which has taken place in this country within the last quarter of a century in buildings for habitation, for manufacture, and for education, will be clearly made manifest, and that pains will be taken to show how so complex a problem as making a dwelling-house, a factory, or a school as healthy as it can be, should be attacked, and has been, in fact, successfully dealt with. The healthiness of a building depends upon its whole architectural treatment, the choice of site, the aspect of the different rooms, sufficient window space, sufficient air space, good ventilation, freedom from draughts, damp and smoke, and even dust. The appearance contributes its share to the beneficial effect which a thoroughly good building exerts on the health of its inmates. In a house by WATERHOUSE, or a school by ROBSON, or an institution by SAXON SNELL, all these influences are combined, as far as the circumstances of the case permit, for the good of those who are to occupy the building, and it is this co-operation of architecture with hygiene which we would gladly see illustrated.

Of course all these qualities can only be perfectly appreciated in the actual building, and buildings, even the smallest, cannot be taken to Kensington as boats and nets could, nor can they be erected there to any great extent ; but in the plans of structures provision is made for every one of them, and in good plans or models well shown the science of healthy building not only is embodied, but can be to a considerable extent exhibited.

It might even be possible to point out in some way the excellency of the plans which are adjudged fit to be presented, in sufficient detail to enable the public to judge why from a health point of view they were judged fit for distinction ; and should this be attempted, and properly carried out, it will prove eminently instructive, not only to the general public, but to architects themselves, and to those caterers for public accommodation who create the dwelling-houses not only of the million but even of the "Upper Ten."

We shall watch with no small interest the development given by the Commissioners appointed by the Prince of WALES, and headed by him, to this part of their proposals. It is a matter of regret that while there are no fewer than four medical men, there is no architect and no engineer on the Commission ; but this omission may perhaps not prove so detrimental to the object we believe to be one of the most important of those which the exhibition contemplates—the demonstration of the influences which the architectural design of buildings exerts on those who occupy them, and the way in

which every part of a building, and the structure as a whole, should be so framed as to promote their health. Physicians are quite as much alive to this as any other class of observers, perhaps more so, and they know better than many other people that such influences as these, though they have been too often overlooked or ignored, are of primary importance to individual and public health.

## FIFTY YEARS AGO.

ONE man alone in England is competent to draw a contrast between the condition of architecture fifty years ago and to-day. Need we say it is the NESTOR of the profession, Emeritus Professor DONALDSON? He has, like the Greek hero, "so long walked hand in hand with time," that he could go back in recollection for even another decade. Sixty years since Professor DONALDSON had acquired a reputation. His design for a Temple of Victory was exhibited in the old Royal Academy at Somerset House. Before that time it had gained for its author the honour of admission to the Roman Academy of St. Luke, and as if to testify that a work of art is, like CLEOPATRA, unaffected by time, it was very lately engraved in a French periodical. It seems like going back to the Heroic Age when one finds that in the same exhibition were the design for BARRY's first commission, his church at Brighton, besides some of his Egyptian sketches the restoration of the Erechtheum by INWOOD, the drawings of the Bank of England by SOANE, the Cambridge College by WILKINS, a dream of Ancient Athens by COCKERELL (who was then without substantial commissions), and rustic lodges by JEFFERY WYATT, known afterwards as Sir JEFFERY WYATVILLE. If Professor DONALDSON would recall his recollections, what a delightful book would be produced, and one, too, without a fellow in English literature ! We have no intention in the limited space assigned to us to attempt any ambitious comparison between the two periods. Our desire is simply to take from the records a few circumstances which may suggest the state of the profession in 1834, just as a cross section here and there often serves to explain a line of country.

There is nothing more difficult than to describe the condition of architecture at any time in a few words. It is like commenting on "things in general" in a sentence. In 1834 there would be no difficulty in obtaining in London as fine a design for a building as could be then obtained in any city in Europe. BARRY had shown of what he was capable by his Travellers' Club House, COCKERELL by his chapel in Regent Street, HARDWICK by his Euston Station and Goldsmiths' Hall, WILKINS by his University College, and among the young men who were looking out for an opportunity there was HARRY ELMES, who in a year or two afterwards carried off the St. George's Hall prize, which COCKERELL was proud to complete. But with all this available ability there was a tendency in the English public to gratify themselves by patronising commonplace architecture both in private houses and in public buildings. It was supposed that nothing could be so "respectable" as cement, and not only were houses built with drab fronts, but fine old red brick houses were coated with that dismal material. A representative man of that time was Mr. McCULLOCH, the political economist (CARLYLE'S "McCrowdy"), and the only occasion when he appeared to be enthusiastic was when he was eulogising cement. It was to his mind as splendid a result of economic science as shoddy, adulteration or other shams. By means of stucco he said the finest freestone could be so closely imitated as to make detection most difficult ; it could be applied to an inferior class of houses, and it permitted an elaborateness of ornament that could not be executed in stone at many times the cost. On public grounds it was no less advantageous, for, as he said, "this method of dressing-up houses has contributed most materially to the improved appearance of the town." A political economist—especially when he holds a lucrative office—always appears to live in the best possible world, and to Mr. McCULLOCH those parts of London which owe most of their elegance to the judicious application of "stucco," were magnificent and incomparable. It is, however, an advantage sometimes to see ourselves as others see us ; and this was possible in 1834, for the Baron D'HAUSSEZ, who was one of the Ministers of CHARLES X., visited this country in 1833 and gave his opinion in print upon what he saw. He was not delighted with English painting or



music, but the architecture, he considered, was worst of all. Building, he said, was reduced to routine—brick was piled on brick, and there was no thought of order or symmetry. Columns were the substitute for ornament. They were placed on cornices and balconies, on shops, palaces, and cottages, and with as much utility in one place as in another. The architect's duty ended when the walls were constructed, and the rooms divided by longitudinal and horizontal partitions. Then came the upholsterer and decorator, who covered the walls with red paper, and introduced furniture and carpets to correspond. In a word, the Baron came to the conclusion that although the English could build towns they were unable to build houses. To what extent was the critic right? The answer will be best suggested if we first consider the state of professional education in those days. One often hears it said that there must be fewer opportunities now than formerly for the attainment of knowledge in architects' offices, and on the other hand it is affirmed that long ago every pupil was a model youth who was eager to acquire practical knowledge, and when his term was expired, he was fit to undertake any kind of building. How pupils were taught fifty years ago can be seen from a remarkable letter which was addressed by a Mr. BELL, an architect, to Sir JOHN SOANE. One extract will suffice:—

In other professions the path is so clearly chalked out, and the studies so well defined for the student, and his *status* so fully acknowledged when he has passed his examinations, that he is at least free from the annoyance of competing with those who have not gone through the same ordeal with himself. But in architecture, when the student becomes one-and-twenty, he suddenly finds himself freed from an office where he has been toiling three, five, or seven years, learning the mechanism but not the principles of his profession, with all his deficiencies staring him in the face, at the very moment when he is most in need of self-confidence. It is possible, though not probable, that there may be a few who, diligently devoting the hours generally allotted to pleasure or rest, may, during their apprenticeship, learn a little of the theory of construction, and something of the history of their art. But their ideas on practical utility, without the advantage of demonstration, must be crude and uncertain; and with regard to the less tangible properties of beauty and proportion, books are not the best masters, since there are too many of them in which contrary theories are upheld, and none in which essential qualities are firmly established. Yet, admitting that the apprentice, during his minority, has taken full advantage of his leisure moments, and learned more without than within his office, still his acquirements are not such as would enable him to pass an examination with credit either to himself or his master. The truth is, that the master (generally speaking) has no interest in his pupil, except in so far as regards his own convenience; and as that can be best attended to by making him one of the instruments of the case he has just taught him to handle, instead of teaching him how to think, he inculcates passive activity. That this must continue to be so, as long as the present system holds, I do not doubt; and consequently many minds of naturally noble germ be crushed by this contracted mode of education. But besides the practical routine of an office, other professions have their schools, their colleges, their able professors—their honours and acknowledged rights. Architecture alone, that which of all others requires the most extensive acquaintance with general principles of science and art, has no schools, and no laws for its government and protection; so that the title of architect being open to all, it has been assumed by every description of persons, from the veriest hedge-carpenter to the most superficial antiquarian charlatan. When these things are considered, it is surprising that more monstrosities have not appeared, and more disastrous accidents not occurred.

The length of this quotation will, we hope, be justified by its interest. It is not unlike many a speech and letter of our time, but the remarkable fact is that although fifty years have elapsed, the public continue to be indifferent to the process by which an architect acquires his title to practice, and it is still possible to appear in borrowed plumes without inconvenience to the wearer. Mr. BELL, with the world before him, was dissatisfied with the profession. Sir JOHN SOANE, who had gained fame and fortune, was of the same mind when he looked back upon his fifty years' practice. In the "Memoirs" which he had privately printed in 1834, there is a strange passage which suggests that Sir JOHN regretted his adherence to the profession, and that in his old age he believed he could have found some other more worthy of his powers:—

Though I have briefly alluded to those intellectual delights and mental gratifications which the architect feels whilst perpetuating in his labours the charms of his chaste and beautiful damsels, yet I have likewise detailed many of those serious mortifications and disappointments that have induced not only the present Master of

the Rolls, but many other highly-talented artists, to retire from the practice of this noble and useful art, after having devoted years of study to acquire a competent knowledge of its theory and practice. Nor will it be matter of surprise if the student in architecture, after glancing over the preceding pages, should be discouraged from the pursuit of his studies, and leave the practice of the profession to the ignorant mechanic, the deceptive contractor, the speculative builder and the fanciful draughtsman.

This passage may have been due to private, rather than professional wrongs, for at that time Sir JOHN was smarting under filial ingratitude, and he had been charged with squandering his money "in the ostentatious gratification of pride and vanity," while his nearest relatives were in a state of pauperism. But it may also have been the outcome of his indignation at the success of some of his incompetent contemporaries. It was hard to see WILKINS preferred before him, but to know that in the Court and in public offices JOHN NASH was considered to be a greater artist than JOHN SOANE, was more than human nature could be expected to bear. His remedy for architectural evils was the adoption of limited competitions, and for all we know it may have been SOANE'S suggestion which influenced the authorities the following year, when it became necessary to procure designs for the new Houses of Parliament. Of one thing Sir JOHN was convinced, namely, that if there had been a competition, the King's palace would have stood on Constitution Hill as he proposed, and that his design must have been accepted. "If this course had been followed," he wrote, "instead of that monstrosity at Pimlico yclept Buckingham Palace, raised to the disgrace of the nation, at an enormous expense, on a swamp surrounded with nuisances of a most disgusting character, we might have seen a royal palace erected on that elevated and salubrious spot, Constitution Hill." In those days writers and speakers were more outspoken than they are now.

Sir JOHN SOANE'S name was the most prominent in the profession at the beginning of 1834. In February he delivered his last lecture at the Royal Academy, and his friends then proposed that a medal should be struck as a memorial of his honourable professional practice, and his liberality in presenting his collections to the nation. Among the members of the committee were BARRY, ANGELL, GEORGE BARCLAY, CHARLES FOWLER, GOLDCUTT, RHODES, ROBINSON, KENDALL, DONTORN, JOSEPH KAY, and THOMAS LEVERTON DONALDSON, all of whom were enrolled on the earliest list of Fellows of the Institute of Architects. The medal (or rather medals, for there were copies in gold, silver, and bronze) was presented to Sir JOHN SOANE in March 1835, with an address which was written by Professor DONALDSON. In the course of Sir JOHN'S reply (which was read by a friend) he referred to the sunbeams and shadows which cross an architect's career, the shadows being "the dissatisfaction which sometimes arises from his zealous opposition to the fancies of his employer, or from the perversion of his own well considered designs in forced submission to the false taste of some influential patron." It was also announced that in commemoration of the event the sum of 150*l.* was to be annually distributed at the Museum among distressed architects, their widows and children. Sir JOHN SOANE also gave 750*l.* to the new Institute of Architects.

The foundation of the Institute was, we may note, another incident of the year 1834. As far back as 1806 there was a "London Architectural Society," but it was not long lived. A second Architectural Society was founded in October 1831. The members ventured on having a *conversazione* on January 21, 1834, in Exeter Hall, and no less than two hundred and fifty people were invited by the president, Mr. W. B. CLARKE. There was a mosaic slab at the entrance of the rooms inscribed *Salve*, on which the visitor was made to tread. The President's pavilion was hung with red drapery, there were architectural drawings, sketches, paintings, &c., to be seen. It was explained by the President that the object of the Society was to establish a British School of Architecture, with a library, museum, professorship, and exhibitions, and to seek a charter in order that the profession might be preserved from uneducated, incompetent intruders, who did not scruple to snatch business from men who had gained their knowledge by hard study and at great expense. In the same month a meeting was held in the Freemasons' Tavern to form another Society; but all who were present were unable to agree. A special meeting was afterwards held at the Craven Hotel, and to it may be traced the foundation of the Society which is known as the Royal Institute of British Architects. The first general meeting was held in June



1835, at the rooms of the Society in "Evans's," near Covent Garden Market, under the presidency of EARL DE GREY. The vice-presidents were CHARLES BARRY, J. B. PAPWORTH, and P. F. ROBINSON; the secretaries, T. L. DONALDSON and CHARLES FOWLER; and the ordinary members of council, J. GOLDCUTT, H. E. KENDALL, GEORGE MOORE, JOHN NEWMAN, HENRY RHODES, G. L. TAYLOR, and ROBERT WALLACE. Among the honorary members were JOHN BRITTON, Dr. WHEWELL, and Professor WILLIS.

On looking over the list of members, one is struck by the preponderance of names associated with the style that was called Classic. SCOLDS and BLORE stood almost alone in representing Gothic among the Fellows. But an event occurred on the night of October 16, which exercised the greatest influence on the architecture of the following years, and for a time made Gothic paramount. Orders had been given that the Exchequer "tallies" should be burnt in the stoves of the House of Lords. The flues were either dirty or defective, and in consequence the Houses of Parliament were destroyed by fire. If it were not for the exertions of Lord MUNSTER and Mr. WESTMACOTT, the sculptor, Westminster Hall would have shared the fate of the adjoining buildings. It was announced that the design for the new Houses of Parliament was to be selected in a competition, and that Mr. HANBURY TRACEY, Sir EDWARD CUST, the Honble. T. LIDDELL, Mr. GEORGE VIVIAN, and Mr. SAMUEL ROGERS, the poet, had been appointed Commissioners to examine and report upon the plans. What followed is known to the youngest pupil of the present day. CHARLES BARRY'S design was selected, and Gothic became the popular style. The mind of the public had been prepared for the adoption of it by the romances of WALTER SCOTT, and we may also note that the "Tracts for the Times," which afterwards had much to do with the substitution of Gothic for Italian and Classic churches, were at this time beginning to attract attention in Oxford.

The year 1834 might be taken as marking the close of an era that had long been moribund. In the next year we find signs that would at one time be thought revolutionary. Attention was for the first time given to the connection between art and manufacture, and a Parliamentary Commission was actually appointed to investigate the subject. To many people it must have been as sure a sign of the downfall of England as the passing of the Reform Bill. But the inquiry opened the eyes of the public for the first time to the necessity of fostering design, and to it may be traced the existence of the Science and Art Department, with its schools, museums, and exhibitions. From what we have said we think it will be evident that since 1834 there has been progression, and in spite of the existing depression may it not be anticipated that in the ensuing half century the rate of progress will not be diminished?

### BUILDERS' GRIEVANCES.

BY STANLEY G. BIRD.

IN taking a retrospective view of the condition of the building trade for the past year, I am afraid it must be admitted that it has been as bad as it possibly could be. Look where one will in the City, large and expensive blocks of offices and warehouses are unlet, and in the suburbs long streets and terraces of houses are tenantless. The signals of distress, "To be let or sold," show, without doubt, that building in London is overdone. This, I regret to say, is also the case in the country. The fact is evidenced by many of the important buildings in London, public and otherwise, during the past two years having been contracted for and erected by provincial builders, many of whom have opened offices in London. This is a serious consideration, and the question naturally arises as to the cause of these firms being able to compete successfully against London builders on their own ground. The answer will probably be apparent to anyone giving the matter a moment's thought. The quarterly register of the state of trade throughout the United Kingdom shows that everywhere alike it is "slack." If confirmation of this were required, reference to the returns of failures would show that the building trade, in proportion to their number, still holds the unenviable position of heading the list. It is a sad reflection, and shows there is a screw seriously loose somewhere, when we find that so many large buildings, the erection of which should have brought honour and profit to the builders, have only resulted in their collapse or ruin.

Much prominence has been given of late by the press to the unsatisfactory condition of houses built in recent times. No doubt this may be true, and is of some ; but it must be remembered that there are "builders" and "builders." It is to the jerry builders that the newspapers refer, and I am sorry that the facts are too strong for contradiction. There can be no doubt that the late depression is responsible in a great measure for this state of things. When a panic occurs people are frightened, and naturally rush to their lawyer for advice, and he suggests a mortgage as a safe investment. The lawyer inquires of a surveyor, who is on the look-out for business, and seeing houses in the suburbs, being run up by a builder, informs him that he can obtain advances for him if required. Frequently the builder has half a dozen other offers of the same kind, and is obliged to decline ; but he has "a friend" who is about to make a start. This friend is probably a journeyman, without a farthing in the world to lose, but everything to gain. By this means hundreds of "jerry builders" or "field-rangers" are created annually. One is led to wonder how these men obtain credit, but when it is seen that merchants are willing and anxious to supply materials on any terms, and when, too, timber merchants offer such facilities as taking bills at six months and then renewing them, one need not be surprised that before the bills come to maturity the builder has vanished, leaving the mortgagee in possession of a questionable security. Occasionally one of these speculating builders blossoms into a contractor. It will be conceded that no trade requires so much general knowledge and such training as that of a contractor ; yet many of these men, with scarce any qualification, go into it with a light heart, often calling in the aid of a local surveyor, who combines the calling of auctioneer, house, coal, and insurance agent with that of the profession of architect. This gentleman makes up the estimates, and being anxious to show his efficiency gets him a few jobs. The result is not often long in showing itself. I have been assured by many friends that much of the work taken during the last year has been at ten and even twenty per cent. under prime cost. This state of things, this keen competition, cannot last, and I trust in the year which is just beginning many will see the folly of continuing it, and will give it up before it gives them up. Things certainly cannot be worse, but let us hope that 1884 may be better and more prosperous, although it does not seem to open brightly, for I am told on all sides that comparatively few prospective works are in contemplation. I do not mean railway or public contracts—though that business, too, is bad—but smaller and the more ordinary building works, which must always form the staple food for the rank and file of the building trade. It has been noticed lately by builders, and doubtless also by surveyors, that in the last few months there has been a great dearth of quantities, and I am told that instead of there being half a dozen or more sets in their office, for which tenders are required, two sets are seldom in at one time.

During this year the Royal Institute of British Architects will celebrate its jubilee, while the builders hope to inaugurate the incorporation of their Institute—perhaps some day it may boast too of the proud title of Royal. I have always felt the necessity for some permanent institution similar to the Royal Institute, and being still more anxious for the well-being and the improvement of the trade, have been at work for some years to this end ; and I am glad to say that I think there is now every prospect of success. I trust the day is not far distant when every one will have to pass an examination and obtain a diploma of fitness before he shall be permitted to call himself a builder.

During the present year it is hoped to obtain a conference with the Royal Institute on several matters of vital importance to the community generally, but to builders in particular. One of these matters is the "quantity question." At a meeting of the National Association of Master Builders of Great Britain, held last summer, the following resolutions were passed, viz. :—

1. That quantities should be taken out by competent surveyors.
2. That quantities should be taken out by responsible surveyors.
3. That quantities should be signed by the surveyor.
4. That quantities should form part of the contract.
5. That it be recommended that the Institute should give some diploma of fitness of surveyors to take out quantities



fairly and properly, somewhat similar to the system established in Scotland of "ordained surveyor."

6. That the Royal Institute and the National Association agree upon a fair form of tender.

7. That the Royal Institute be asked to consider certain amendments to the form of contract; among these an alteration to be made so as to make the quantities part of the contract. Also to provide for extra work being paid for during the progress of the works. Also as to the costs of award, and that an award in arbitration shall be made within a reasonable time, and that no enlargement of time shall be allowed without the written consent of both parties.

I have had some correspondence with Mr. WHITE, the Institute secretary, on the subject, and I believe there is every prospect of a meeting being arranged during the summer. These are matters of the utmost importance to us, and I shall be very glad if, in the meantime, builders and architects will give me the benefit of their experience and advice, so that I may be prepared to fully lay the matter before the Royal Institute.

In addition to the many difficulties which builders have laboured under for some years, an increase in responsibility has now been thrown on them by the introduction of the Employers' Liability Act, and the trade has now established the Builders' Accident Insurance, Limited, to protect themselves against accidents to their workmen.

### SIR JOSHUA REYNOLDS AT THE GROSVENOR GALLERY.

THE popularity of the art of REYNOLDS has never been put to so crucial a test as it now runs in the Winter Exhibition of the Grosvenor Gallery. More than two hundred portraits and fancy pieces fill all the available space, and repeat with a variety in monotony the types and fashions of the painter's time, his moods and mannerisms; appealing, moreover, not as little-known or seldom-seen pictures, but with familiar faces, from frequent public exhibition or presence in English homes.

Everything conduces to this popularity of REYNOLDS. About the life and character of few artists do we know so much or so pleasantly. He is the genial centre figure of a genial circle; brilliant gossip scintillates around him and the varied throng of dames and lordlings, wits, statesmen and philosophers, fair ladies of dubious fame and indisputable charms, or children innocent as the newly-opened daisy, who, under the easy favour of the artist, were welcome to seek immortality at his easel. We read his diary and know all about his strenuous industry, his ambitious efforts to excel and discover and experimentalise; we discern well enough the kind heart and shrewd sense to which his friends high and low alike testified. Further, the portrait art of REYNOLDS is winning by reason of a combination that is quite individual, a fine taste that is close upon the creative, a perception of character that is nearly insight, a grace that approaches the ideal, united to a lovable, almost homely, simplicity, and a use of the dear familiar looks and ways of family life. This union is of course found most distinctly in the pictures of mothers with their children, such as *The Duchess of Devonshire and her Child*; *Lavinia, Countess Spencer, and Viscount Althorp*; *Mrs. Hartley and her Child*, three portrait groups which, for tenderness and grace of motherhood, set forth with pictorial style, cannot be surpassed within the circle of actual, not ideal, art. After these subjects come the single studies of children, the freakish darlings with their pet animals—little *Miss Cholmondely* crossing a stream and hugging her dog with such deliciously anxious effort; *Muscipula*, with her mouse-trap; *Felina*, with her cat; and that lovely figure of little *Master Philip Yorke*, with the robin on his shoulder and the dog looking up in his face, which will be new to many visitors to the Grosvenor Gallery. For perfect rapport between the child and his bird and the dog, for spontaneous grace of pose in the set of the boy's figure, outstretched arms, and bent curly head, this slightly-finished piece (the hands are more suggested than painted) is one of the most perfect specimens of REYNOLDS' child-pictures. To the company must be added *Lady Fitz Patrick*, a tiptoe on the hill-top, dainty as if dropped from

the skies, and *The Hon. Francis Harris with a Dog*, a charming composition but in very bad condition.

Perhaps in no quality did REYNOLDS show his artistic nature more than in the relation between his treatment of a subject and the subject itself, apart, that is, from his abominable experiments with varnishes and pigments, for which he is no doubt repentant in some artists' limbo at this moment. It were not too much to say that instinctively he seems to have felt his way to the touch and style which best befitted the age and character of the person before him.

His faulty or careless drawing, his generalised draperies, the lack of substance and distinct articulation of form that may be honestly admitted as too frequent—these imperfections or positive faults are incident to every class of subject which he treated. His technique, moreover, was influenced by the restless experimentalising spoken of before, and by the sway of the master whose method for the moment he sought to emulate—TITIAN or RUBENS or VANDYCK. But, taking all these matters into account, there remains a fine correspondence between matter and manner, to put the case roughly, which is notable and distinctive. Compare, for example, the child pictures named above with the portraits of *Elizabeth Gunning, Duchess of Hamilton, The Hon. Mrs. Beckford, The Countess of Mexborough*, and pictures of that sumptuous class, or with the simpler but still elegant *Lady Henrietta Herbert* in a dark hat; *Lady Anne Bingham*; *Lady Caroline Keppel*; *Lavinia Bingham, Countess Spencer*; *The Young Lady*, niece of BURKE's lawyer; or with *Mrs. Nesbitt as Circe*, or *Mrs. Collier as Celia lamenting*, or with the deliberate, smooth, and solid *William Augustus, Duke of Cumberland*, with his portly person wrapped in robes of the Garter, or the VANDYCK-like study of *George John, Viscount Althorp*, at seventeen, or the incisive and carefully-modelled bust-portrait of *Joseph Baretti*, or the precise *Warren Hastings*, or the glowing face of *Richard Burke*, or the *David Garrick* and other studies of facial expression. Then the nude figures painted in emulation of TITIAN, forced up with melting golden varnish and strong *chiaroscuro*, and the grandiose portraits, such as the famous *Mrs. Siddons as the Tragic Muse*—they all have their especial and appropriate mode.

This collection at the Grosvenor Gallery is, on the whole, as complete as need be, with the exception of important allegorical pictures such as the *Virtues* for the New College windows, and dramatic efforts like the *Ugolino*. The gathering is thoroughly representative. Canon FURSE and Dr. HAMILTON have lent black-and-white sketches, interesting as first notes of composition. Among the pictures exhibited can be traced the repetition of attitude or arrangement of detail which is often made at request of sitters, by a popular portrait painter, or from his own favourite fancy. The student of method, too, has ample field for curious investigation in following the phases of REYNOLDS's technique, especially where cleaners have not been allowed to skin a picture alive, as in the lamentable case of the famous *Mrs. Pelham Feeding Chickens*. We may freely grant all the shortcomings, groan over crackled varnishes and decomposing carnations, slovenly drawing and characterless drapery, with what other indictments may be made against our genial English master; but for all that we "shall never look upon his like again."

### THE PRIORY OF THE HOLY TRINITY, DUBLIN.

By THOMAS DREW, R.H.A.

FOR many years the site and plan of the cloister garth and the surrounding monastic buildings, which must once have been a part of the Priory of the Holy Trinity (now known as Christ Church Cathedral), Dublin, have been a matter of curious speculation to me. The church alone has survived to our time. I knew it all before Mr. Henry Roe's great restoration. Every detail of that restoration, with its marvellously interesting revelations of the church's former plan, was familiar to me, as all the church is now. I had read all that is known to be recorded of it, but without meeting the slenderest clue to the history or existence of the former subsidiary buildings of the monastic establishment.

By Mr. George Edmund Street, R.A.—to whose marvellous instinct for the comparative anatomy, as I may term it, of a



Mediaeval building and profound architectural erudition we owe the re-creation of this perfect and unique twelfth and thirteenth century church from merest shreds of evidence—the site or plan of the monastic buildings was untraced or uninvestigated. I know this from the interesting account of the restoration penned by this great architect himself, and left unpublished at his death, the proofs of which, before its publication, it was my privilege to revise. It has been a matter of great interest to me—following, *longo intervallo* indeed, so great a master in the care of the cathedral—to alight upon some threads of evidence not only to identify the site of the monastic buildings, but to trace their plan with a bold hand, leaving but little conjectural of what goes to fill in the outlines.

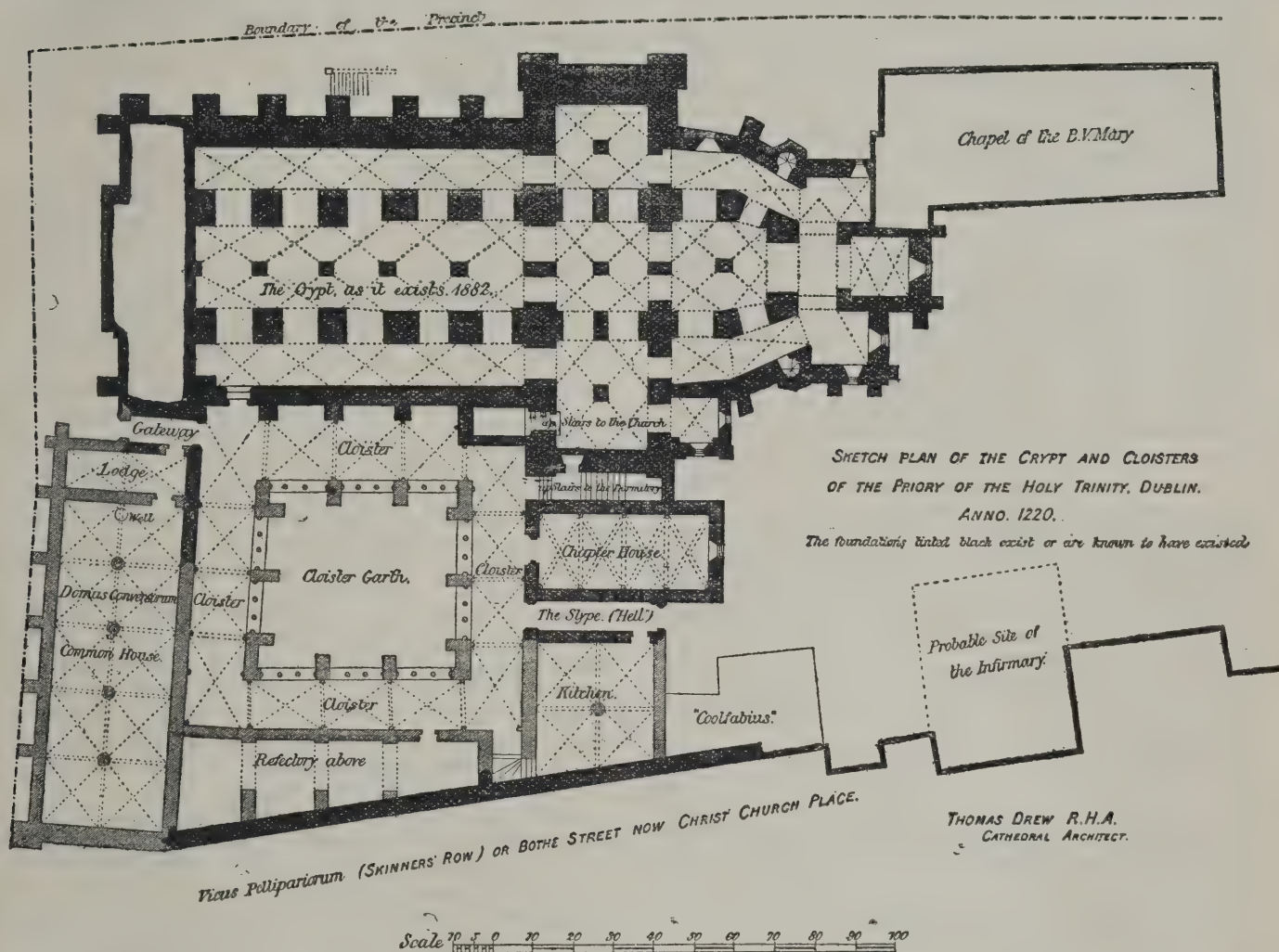
I have long looked for even a hint to aid speculation as to whether the cloisters stood upon the north or south side of the church, as they indifferently do in the monastic plan. I inclined to surmise on the north, as nothing more unlikely than the south side as it exists (a steep declivity between Christchurch Place and the cathedral), as a site for the level of a cloister garth, could have

the chambers over it. I have no doubt they are those very ones offered by an advertisement in a Dublin paper of that time—

To let, apartments in Hell.  
N.B.—Well suited to a Lawyer.

Further information as to the “Exchange” was given me from a map, the accuracy and authenticity of which I cannot well doubt from its internal evidence, although the sources from which it may have been compiled are a mystery.

Bound up in Kelly's new (and uncompleted) edition of Archdall's “*Monasticon Hibernicum*,” vol. ii., is a map of Christ Church Cathedral and precinct, evidently not drawn for this work. The text has no reference to it, and the reference figures on it are sought for in the body of the work in vain as having any meaning. I have, however, ascertained that this map was intended for a work by William Monck Mason, never published. It would appear that his well-known history of St. Patrick's Cathedral was not intended to be a monograph, but the first instalment of a great



suggested itself. I had scarcely entertained a thought of looking for anything so improbable. However, there is preserved in the cathedral, by some happy chance, a comparatively modern document—a map and survey of the cathedral property, with a schedule, prepared by one John Sedding in 1761. It shows the old Four Courts, and the passage then colloquially known as “Hell,” the Exchange, and, as the schedule quaintly sets forth among other things, “the place where the stocks is;” \* it delineates the many houses and small tenement holdings in Skinner Row, now swept away, and the two “yards” surrounded by shops and small booths intervening between these and the south side of the cathedral.

Looking at Sedding's map, the last thing that would strike most people would be to develop the plan of a monastery out of it. Views of the cathedral from the south-east, given by Grose in 1791, and drawn as late as 1821 by George Petrie, give a rude notion of what the “Exchange” was. It is at once recognisable as a Mediaeval groined building, and Sedding's schedule sets forth

and ambitious work, “*Hibernia Antiqua et Hodierna*, being a Topographical Account of Ireland, and a History of all the Establishments in that Kingdom, Ecclesiastical, Civil, and Monastick.” I have the prospectus of the volume relating to Christ Church projected in 1819. This projected volume never saw the light, and the MSS. and raw material collected for it found their way to what is known as the Phillips collection, locked up from scholars at Cheltenham. The steel plates intended for it were sold at an auction in London, bought by Mr. Kelly, and inserted *passim* in his new “*Monasticon Hibernicum*,” to adorn the work, merely. Mason's map gives the Exchange as a four-bayed groined building.

It scarcely needs a glance from anyone acquainted with the typical monastic plan and its varieties to recognise this building as the ancient Chapter-house in its usual and expected place with reference to the church. It stands east and west, about seven feet away from the south transept, and the views above referred to show us the monks' dormitories over it. The passage that intervenes between the Chapter-house and transept in Sedding's map gives, where one would look for it, the staircase by which the

\* The stocks are still preserved in the cathedral.



monks passed from their dormitories to the church. Knowing that the south transept had been greatly altered in 1831, when the old door, brought from the north side, was inserted in the middle of it, I looked for a trace of the monks' door where it should be, and then found it plainly indicated by the built-in masonry to the left of the present doorway. Here were clues, absolutely determined, to point to the existence of cloisters on the south side.

To the south of the Chapter-house, in most monastic plans, one looks for the passage called the "slype." Here it is found clearly defined in the old plans, remembered by some still living citizens, and familiarly known by the more modern name of "Hell," even so far away as to Robert Burns. The lines have been often quoted :—

But this that I am gaun to tell,  
Which lately in a night befel,  
Is just as true as deil's in hell  
Or Dublin city.

We know that next to the "slype" would come the kitchen, or "calefactory," the day-room of the monks, its limits only wanting to be defined, and which Sedding's map supplies when studied.

This would have been all to be derived from Sedding's plan, but for another thread of evidence. I had occasion, in 1881, to cut a deep drain across the cathedral precinct on the south side, and I looked with interest for the uncovering of part of the walls of the old Four Courts.\* I found the walls where I crossed them exactly as laid down in Sedding's plan, but found a remarkable difference in the walls themselves. The east and west walls of the old Court of Common Pleas did not go down to a deep foundation, but were borne above the peat stratum on great beams or cradles of massive oak. The west wall of the King's Bench, however, was different. It was carried down to a greater depth, to the solid foundation beneath the peat, and was an enormously solid mass of ancient masonry. Here I recognised an ancient wall of the monastery. I also laid bare and ascertained the ancient level of the cloister garth, finding it about nine feet below the church floor, and nearly on the level of the floor of the crypt. This solved several problems of built-up doorways, steps, and approaches, which had puzzled everyone. The existence of a cloister-garth at such a level, levelled for and scooped out in the side of a steep declivity, was unexpected.

A practical mind will at once infer the existence of a great retaining wall somewhere that would be required to keep back the overhanging bank on the south side. Sedding's map at once indicates it. A narrow yard, or area—say four or five feet wide—which may be traced along the back of the houses in Skinner's Row, described as for instance :—

"The precinct wall, serving as a backside to the houses of Mr. Wingfield and Mrs. Parsons, in Skinner's Row, and giving light to their back rooms."

Thus I can trace the limit of the monastic buildings at the south side. I was disappointed to come on no remnant of the eastern precinct wall, in what is now St. Michael's Hill, but Mason's map lays down its limit, and it exactly coincides with the line of the west side of Christchurch Lane, as it existed in 1761, about the centre of the present roadway. It is parallel with the ancient wall to the west of the King's Bench Court, before alluded to, so that here we have, with but little conjecture, the limits defined of the Domus Conversorum, sometimes known as the Common House, which we would look for in the usual monastic plan, and we recognise, under a misunderstood and corrupted name, the "Commons House" of Christ Church Cathedral, so often mentioned in records, where sundry parliaments were held, the last in 1559; not a "House of Commons," but the common house of the guests, postulantes, and brethren of the monastery.

Analogy of similar plans would lead us to look for the abbey gateway in the north-west corner of the group, and then we suddenly recall that we all remember it, unrecognised as such, before the late restoration. There are photographs showing it extant. Little knowing that the cloister level lay 9 feet under the surface of the soil, one did not recognise in the cellar-like arch above it the head of the abbey gateway. Its site was exactly under the doorway of the present south-western porch. A gate-house lodge, or parlour, should have been about here; my restora-

\* The Four Courts were built upon the site, and in part on the foundations of the monastic buildings and cloister garth by the Crown, in 1695; the Dean and Chapter receiving 10*l.* per annum rent for the ground. The last remains of these were covered in about 1826.

tion of this feature is purely conjectural. Assuming the precinct boundary to fix the width of the Common House, I conjecture it as arched in two spans, with a row of pillars down the centre, as would be most usual in such a building.

For the refectory I have only, I admit, such slender evidence as the precinct boundary well-defined, and the analogy of other monastic plans affords: we know from precedents that it should be traced here. Taking all the evidence which has been recited, and other minor corroborative hints which the old plans afford, one can sketch the cloister plan so far, but to find that there would not be room for the refectory to stand east and west in the usual way, between the south cloister walk and Skinner's Row. It could not have projected from the group standing north and south, as it does in other places, because the limit of the precinct forbids. One then recollects the declivity of the ground, and that if it had been planned upon the same level as the cloisters, it would have been many feet below Skinner's Row, and that passers-by would have looked down into its chimneys. Everything points to the conclusion that the refectory was not on the ground-level, but on that of the dormitories, and extended over the south cloister walk. Here, again, the plans give faint indication of a passage next the kitchen, which would exactly serve in position for a staircase between the kitchen and refectory.

The following are definitely or approximately the internal dimensions of the several parts of the plan :—

Cloister garth and cloisters . . . . .	76 feet by 84 feet.
East Side—Dormitory staircase leading to church, . . . . .	25 feet ,, 7 feet.
Chapter-house . . . . .	42 feet ,, 20 feet.
Slype . . . . .	28 feet ,, 8 feet.
Kitchen . . . . .	30 feet ,, 30 feet.
South Side—Staircase . . . . .	26 feet ,, 7 feet.
Refectory . . . . .	75 feet ,, 33 feet.
West Side—Common House . . . . .	82 feet ,, 29 feet.
Lodge . . . . .	29 feet ,, 10 feet.
Gateway . . . . .	17 feet ,, 7 feet.

Beyond the cloister walls, speculation can but vaguely follow the existence of the inferior buildings of the monastery. The broken outline of the precinct suggests the projection of square buildings, and one places the finger on the spot where the infirmary would most likely be. A shred of evidence is, I believe, locked up in a term I cannot construe. Sedding, in his schedule of tenements, describes several of them in this wise, *e.g.* :—"23. Part of *Coolfabius* as a backside to Mr. Sillcock's house in Skinner's Row."

When I trace out the plots described as "Part of *Coolfabius*," and obliterate modern boundaries and walls, I find that this is a corner by the east wall of the kitchen, and under the great overhanging wall of the precinct. I believe I recognise in the name the Irish word *cuil*, a corner, and I look with confidence to some better antiquary to interpret what this corner was.\* It is the spot where one would look for the offices of baser use—the middens, privies, and great drain from the kitchen.

Under the present green sward, between the railings of Christchurch Place and the church, antiquaries may assume the foundations of these buildings lie, and may yet be investigated. It may be a parallel for the discovery of a fragment of the cloister of old St. Paul's, which has led to the creation of a pretty garden in the heart of London, if we should some day uncover some of our cloisters to be an object of interest in the city garden, which I hope may be created in the yard of Christ Church Cathedral.

## PARIS NOTES.

M. GAILLARD, a rich amateur, has announced his intention of founding a travelling scholarship for young architects desirous of visiting the architectural treasures of France. It will be awarded by open competition, and the jury will be chosen by a ballot of the competitors themselves.

In the first stage of the Achille Leclère competition in architecture, the authors of thirteen out of the twenty-seven sketches sent in have been admitted to take part in the final contest. The completed designs must be forwarded to the secretary of the Institute on or before February 29 next, and judgment will be announced on March 8.

\* Dr. Joyce, on being consulted, is unable to form an opinion as to the meaning of this name.



Another architectural competition, that for the Prix Godebœuf, one of the most important of the year, has been decided, the winner being M. G. Le Roy, a pupil of MM. Coquart & Géraldt. The subject given was a "funeral monument."

M. Lauson, sculptor and Grand Prix de Rome, has just presented to the Académie des Beaux-Arts a plaster statue of the Comtesse de Caen, who was known, as the artist's benefactress. Madame de Caen is represented seated in an arm-chair, holding her will in the right hand and a small statuette in the left. The work is to be placed in the museum founded by and named after the Countess.

Several of the Paris papers announced erroneously that the famous Panthéon mosaic would be uncovered during the *neuvaine* (or anniversary week) of Sainte-Geneviève, the patron saint of the edifice and of Paris. The artists to whom this beautiful work was entrusted asked eight years for its completion. Five years have scarcely elapsed since its commencement, and the mosaic itself may be said to be finished; but the frame and other details remain to be done, and will require about two years for their completion. It is not expected, therefore, that the work can be given to public view before the year 1886.

The old building known as the "Tour du Moulin" (Miller's Tower), that stands in the Montmartre Cemetery, was lately threatened with destruction by the authorities of the cemetery, in order to utilise its site for burial purposes. On hearing of this intention, however, the Historical Monuments Commission came to its protection, with the result that the destroyer's hand has been arrested, and this interesting relic of the seventeenth century will be preserved. According to archæologists, the tower belonged to a mill built by the Frères de la Charité—a religious body that first established itself in Paris on the invitation of Marie de Medicis.

Several important resolutions affecting the regulations of the National Triennial Salon have been arrived at by the superior Council of Fine Arts. At the first exhibition of this kind, held last autumn at the Palais de l'Industrie, in the case of works that had already been publicly exhibited, a written notice or description of the subject was all that was required for submission to the jury. In future all works sent in will have to be personally inspected by the jury, of which the Director of National Museums, the Conservators of the Louvre and the Luxembourg, the Director of Public Buildings, and all ex-directors of fine arts, will henceforth be *ex-officio* members. The number of works to be admitted has, moreover, been considerably reduced—the paintings from 800 to 600, the drawings and water-colours to 150 in all, and architectural designs to 40. It was proposed to the Council to decide that the exhibition should comprise a certain fixed number of entirely new works; and the discussion made it evident that the admission is likely to be encouraged. This seems hardly compatible with the avowedly retrospective nature of the exhibition, and goes far to account for and justify the hostile attitude now being taken up by the Artists' Society towards the Triennial Salon, particularly as the next one is fixed for May 1886, when it will directly clash with the annual Salon, which opens about the same time.

Immense buildings are now in course of construction as an annexe to the Lycée Louis-le-Grand. They occupy a corner of the Luxembourg Gardens lying between the Rue d'Assas, the Avenue de l'Observatoire, and the Rue de l'Abbé de l'Épée, their total ground area being upwards of 10,000 square mètres. Operations were commenced in March last, the masonry work is nearly finished, and the new college is expected to be ready for occupation by the end of the present year.

A remarkable mosaic has just been discovered at Nîmes. It is no less than 12 square mètres in superficial area, and represents a Roman emperor seated on his throne with a nude female figure beside him; in the foreground two servants are depicted leading, one a lion, the other a wild boar; behind the throne stands a soldier with the Roman helmet, and on one side a number of slaves are represented as arriving in a great state of hurry. This valuable relic of old Gaul has fortunately escaped without damage from the picks of the excavating workmen; the design is perfectly clear and the colours almost as fresh as if recently executed. The

local journals, with perhaps a little pardonable exaggeration, talk of the new find as worth a million francs, and competent judges declare it to be certainly the most beautiful mosaic of the epoch yet discovered, while it appears that the late owner of the house beneath which it was found received only 40,000 frs. from the municipality when his property was lately expropriated for improvement purposes. The mosaic is to be enclosed in a strong iron frame and placed in the temporary museum, pending its removal to the permanent Art Galleries and Museum now being erected by the town.

THE NEW LAW COURTS.

It is gratifying to find that there is at least one official who is willing to testify that the new Royal Courts of Justice have some good qualities. Mr. G. G. Kennedy in relating his own experience says:—There is one virtue in the courts which is of paramount importance to those whose duties, like mine, compel them to be in attendance from half-past 10 to 4, and that is ventilation. The air circulates freely, and in this respect the courts compare favourably with all other law courts in the kingdom which it is my fortune to know. Some, I know, complain of draughts; but where, may I ask, is there not one person in a court of justice who makes this complaint whenever the air is freshly circulated? The consequence is that, instead of feeling wearied and depressed at the end of the day, as one used to feel after a similar day's work in the Westminster courts, one feels fresh and able to settle down to work in chambers without the struggle against that feeling of exhaustion and "court headache" engendered in the old days. The acoustic properties of the present courts are not so good as they might be, but sitting in the third row of benches one can hear sufficiently well. The passages are rather dark; but this is a matter surely of secondary importance. The courts may not be easy of access; but their inaccessibility is not an unmixed evil, if it only places obstacles in the way of that army of unsavoury loafers who used to crowd into the courts at Westminster. I can only add that since the change to the New Law Courts I have felt a different person after my day's work there, and that I am ever grateful to the eminent architect who designed them, and to others to whom I am indebted for the present improvement.

BUILDING IN GLASGOW.

It is satisfactory to find that there are now better prospects for builders in Glasgow than has been the case. The *Glasgow Herald* says that the position of the building trades is a matter of current knowledge. On every hand structural operations can be seen in progress, and these are of such a nature that for some months to come there cannot be any diminution of the prosperity which set in early this year. Of new works there are notably the Municipal Buildings, just commenced; the restoration of the extensive properties recently destroyed by fire in Buchanan and St. Vincent Streets, the extensions at the City Fever Hospital, London Road; the operations in connection with the City and District Railway, as well as many more private undertakings which have been arranged for in different quarters of the city. A good idea of the amount of building-work on hand—though sanctioned, the greater proportion remains to be executed—will be formed from the following statement, kindly and specially prepared by Mr. John Whyte, assistant master of works:—

LININGS GRANTED BY DEAN OF GUILD COURT, WITH VALUATIONS IN 1882 AND 1883.

Nature of Operations.	1882.		1883.	
	Linings.	Valuation.	Linings.	Valuation.
New dwelling-houses and shops	24	£97,050	25	£113,500
Alterations on shops and dwelling-houses	35	13,671	41	17,855
Warehouses, workshops, offices, stables, byres, and alterations on such premises	144	290,830	157	193,276
Churches, halls, schools, and other buildings for public purposes with alterations in such	24	97,865	24	360,369
Totals	227	£499,416	247	£684,980
Increase, 1883	—	—	20	£185,564

The masons—of whom there are about 1,800—now receive 7½d. per hour, which is ½d. higher than last year's rate. Bricklayers are paid 8d. and slaters 7d. per hour.



## NOTES AND COMMENTS.

THERE is an interesting exhibition in Bond Street, in connection with the Art for Schools Association. The committee have brought together several engravings, etchings, and autotypes from good pictures, and the object of the association in suggesting what kind of illustrations can be had without much cost is laudable, and deserves encouragement. The largest and by far the cheapest example in the exhibition is the copy of the frieze by M. DIDIER, which was published in *The Architect*. But we trust that the system of mounting it adopted by the Committee will not be followed by teachers. From its length it was necessary that the frieze should be published in sections, but the margins of the divisions do not require to be perpetuated; there is no advantage in having the parts of a figure separated by a white space, and the arrangement would naturally be puzzling to a child.

ONE of the most pleasing of the old Greek legends is that which relates the contest between a flower girl and a painter. The girl was to make garlands and the painter to copy them, but in the end the girl was victorious, for she combined flowers with a dexterity that the painter was unable to follow. The contest has been made the subject of a picture by Signor SCIFONI, which is engraved in CASSELL'S *Magazine of Art*. But unfortunately the legend was unknown to the company's writers, and the picture is interpreted in a characteristic fashion:—"PAUSIAS is interested, GLYCERA for once is embarrassed: it is the beginning not only of a masterpiece, but of an affair of the heart. Even now it is not impossible for painters to fall in love with their sitters. The present picture, with its inspired painter, its sweet and gracious model, its chorus of pretty duennas, may not be inaptly described as," &c. Writing of this style may be captivating to milliners' apprentices, but we should like to know what Signor SCIFONI thinks of it, and of the competency of English *littérateurs* to degrade a picture.

A SOMEWHAT similar discovery has been made by the art critic of the *Standard*, in his description of Mr. LONG'S picture *Anno Domini*. In this work (which the artist wished to call by the more appropriate title *The Unknown God*) there is a procession of Egyptian priests and other dignitaries, and a figure of ISIS is made one of the principal objects. There is never much difficulty in deciding that ISIS was a goddess, not a god. But the *Standard* critic says, "It represents the chance encounter of two processions within sight of the Pyramids. One is the procession of ISIS, with the god himself, his priests, his fair minstrels, &c." When it is remembered that this sentence was examined by readers and sub-editors, and probably by the editor himself, it would appear that the *Standard's* scholarship is still as remarkable as when in a leading article AUGUSTINE of Canterbury was confounded with AUGUSTINE of Hippo. With such examples before them, and remembering other blunders, is it surprising that painters and sculptors do not welcome journalists to their studios?

THE destruction of the Roman Catholic Church at Leamington by fire has been made the opportunity by the Rev. Canon LONGMAN to teach some important lessons to his brother clergymen. The first is, that no organ tuner should be allowed to go to the organ without the knowledge of the rector of the church, and that an unprotected candle should not be used while working within the instrument. The second is, that churches should be provided with adequate means for extinguishing fires. Although at Leamington the office of the fire brigade was near the church, and notice was sent there at once, the men of the brigade were not ready, and the half-hour's delay was the loss of the building. Lastly, it is recommended that the property should be insured at full value, which was not the case at Leamington. This advice is useful, although in some places it would be difficult to find enough men to use the apparatus for extinguishing, or enough water. But if organ tuners and the workmen who are employed for occasional jobs were properly overlooked, there would be little danger of fires in churches. In those cases there is no supervision.

THE restoration of the west front of Lichfield Cathedral is now almost completed, as far as the structural portion of the work is concerned, and seventy-three of the one hundred and

twelve niches already contain figures, most of them given by individual donors during the progress of the restoration since 1877. Of the remaining thirty-nine niches, some are occupied for the present with the old Roman cement figures of kings of the Norman dynasty. There still remain, however, some twenty-five vacant niches to be filled. Of the figures specially wanting to complete the western façade proper, there are four of the minor prophets, two of the archangels, and two of the Apostles. The Dean is desirous to obtain donors for these while the scaffolding is still standing, the contractor, Mr. THOMPSON, having kindly allowed it to remain for a while in the hope that more figures may be promised. The cost of a figure varies from 26*l.* to 45*l.*

During the ensuing session the following papers will be read at the ordinary meetings of the Society of Arts:—"Electric Launches," by A. RECKENZAUN; "Science Teaching in Elementary Schools," by WILLIAM LANT CARPENTER, B.A., B.Sc.; "Coal Gas as a Labour-saving Agent in Mechanical Trades," by THOMAS FLETCHER, F.C.S.; "Sanitary Progress," by B. W. RICHARDSON, M.D., F.R.S.; "The Progress of Electric Lighting," by W. H. PREECE, F.R.S.; "Forest Administration in India," by Dr. BRANDIS, F.R.S.; "Reclamation of Land on the North-Western Coast of England," by HYDE CLARKE; "Water Regulation in England," by General RUNDALL; "Telpherage," by Professor FLEEMING JENKIN, F.R.S.; "New Process of Permanent Mural Painting" (invented by ADOLPH KEIM, of Munich), by Rev. J. A. RIVINGTON; "Slate Quarrying," by W. A. DARBISHIRE. Courses of Cantor lectures will be given on "Recent Improvements in Photo-Mechanical Printing Methods," by THOMAS BOLAS, F.C.S.; "The Building of London Houses," by ROBERT W. EDIS, F.S.A.

A new arrangement is to be made in regard to the frescoes in the Manchester Town Hall. Originally it was agreed that, out of the eighteen frescoes, nine were to be painted by Mr. FORD MADOX BROWN, and nine by Mr. F. J. SHIELDS, the price for each panel being 275*l.* Two or three years ago Mr. SHIELDS informed the Town Hall Committee that he was unable, on account of the condition of his nervous system, to undertake the commission. It was resolved on Wednesday to entrust the remainder of the frescoes to Mr. MADOX BROWN. The Council have also shown liberality in their dealings with the artist. Mr. MADOX BROWN found that he was impeded in his work by the number of visitors to the Town Hall, and he applied for an increase of the price, which was absurdly low. An extra sum of 100*l.* will be paid for each fresco that has been completed, and the price for the remainder will be also 375*l.* each. Considering the labour expended by Mr. MADOX BROWN on those works, it is astonishing how he can be sufficiently remunerated with even 375*l.*

A portrait of the late Mr. J. H. CHAMBERLAIN has been offered to the Birmingham Art Gallery by Mrs. CHAMBERLAIN. It is stipulated that the following words are to be placed beneath the portrait:—"In loving memory of JOHN HENRY CHAMBERLAIN, a portrait of him is given by his wife and children to the Art Gallery of Birmingham, in the year 1884." But as it would not be a good precedent to set up, the Gallery Committee will hardly be able to accept the gift unless the inscription is withdrawn. The portrait is by Mr. RODEN.

The late Mr. HOLLOWAY had a great deal of the despot about him, although he considered it was only remarkable decision of character. At the time when he was arranging the competition for his colleges, the writer happened to speak to him about the nature of the report that the consulting architect was to prepare, whereupon Mr. HOLLOWAY—in novelist's language—drew himself up to his full height, and said, "I look upon myself as the Emperor of Germany! I receive reports and advice, but it rests with me whether they are to be acted on, and I shall select the design which best pleases me." He did not, however, announce his determination, and under the circumstances a consulting architect appeared to be useless. Mr. HOLLOWAY wished to have a grand Gothic edifice, but his adviser was selected on the ground that he was not distinguished as a Goth. "In the present state of architecture," said Mr. HOLLOWAY (and the words indicated his shrewdness), "it would be impossible to find a Gothic architect who would be impartial. Every man has his pet style, and he dislikes all others."









DESIGN FOR AN  
AWARDED ROYAL ACADEMY GOLD  
By EDWIN



Jan<sup>y</sup> 12<sup>th</sup> 1884.

ROYAL ACADEMY OF ARTS.  
MEDAL & TRAVELLING STUDENTSHIP.  
GEORGE HARDY.

*Sprague & Co. 22 Mark Lane London St. E.*



ACADEMY OF ARTS.  
DAL & TRAVELLING STUDENTSHIP.  
RGE HARDY.

Straque & Co 22 Martins Lane Cannon St E

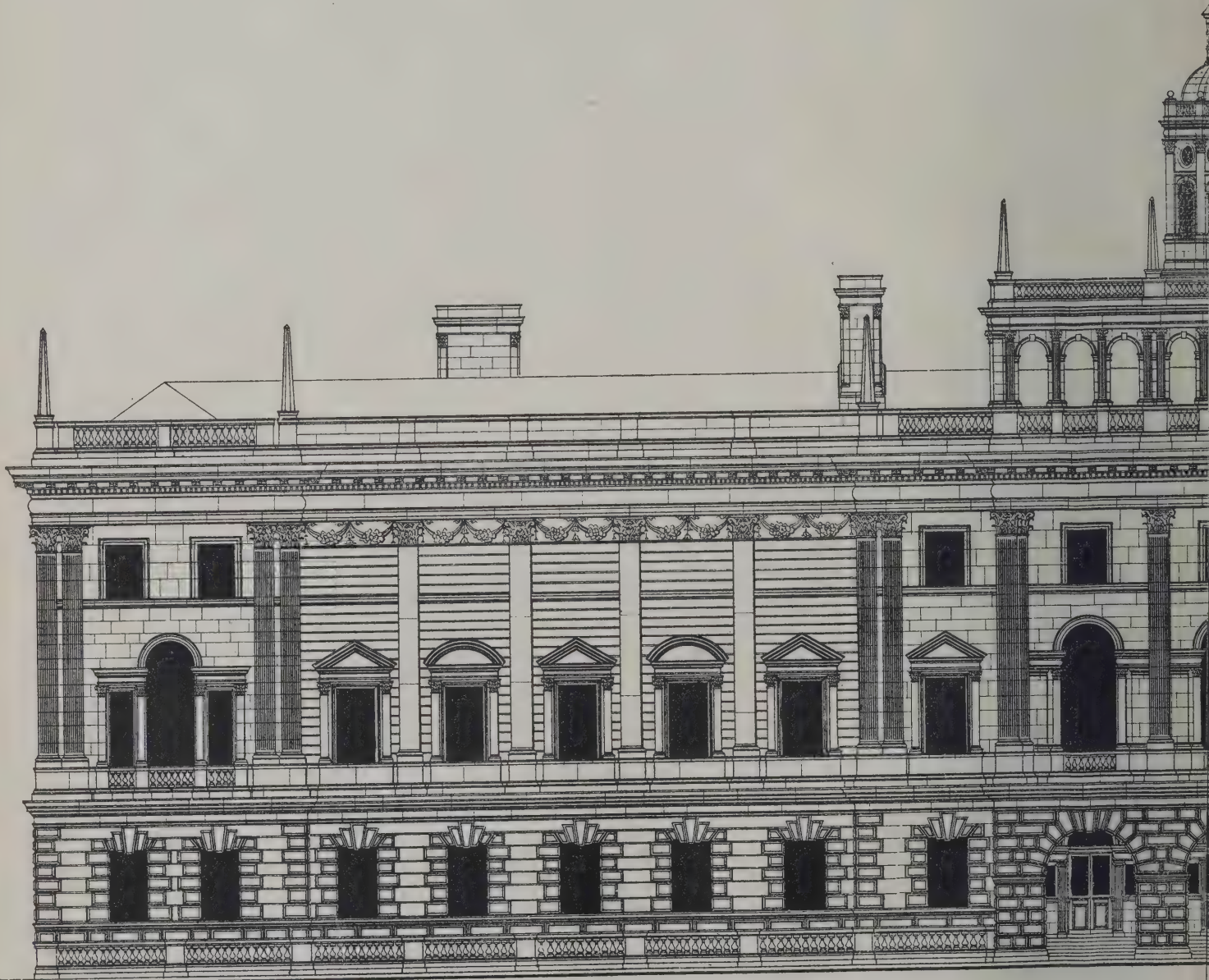










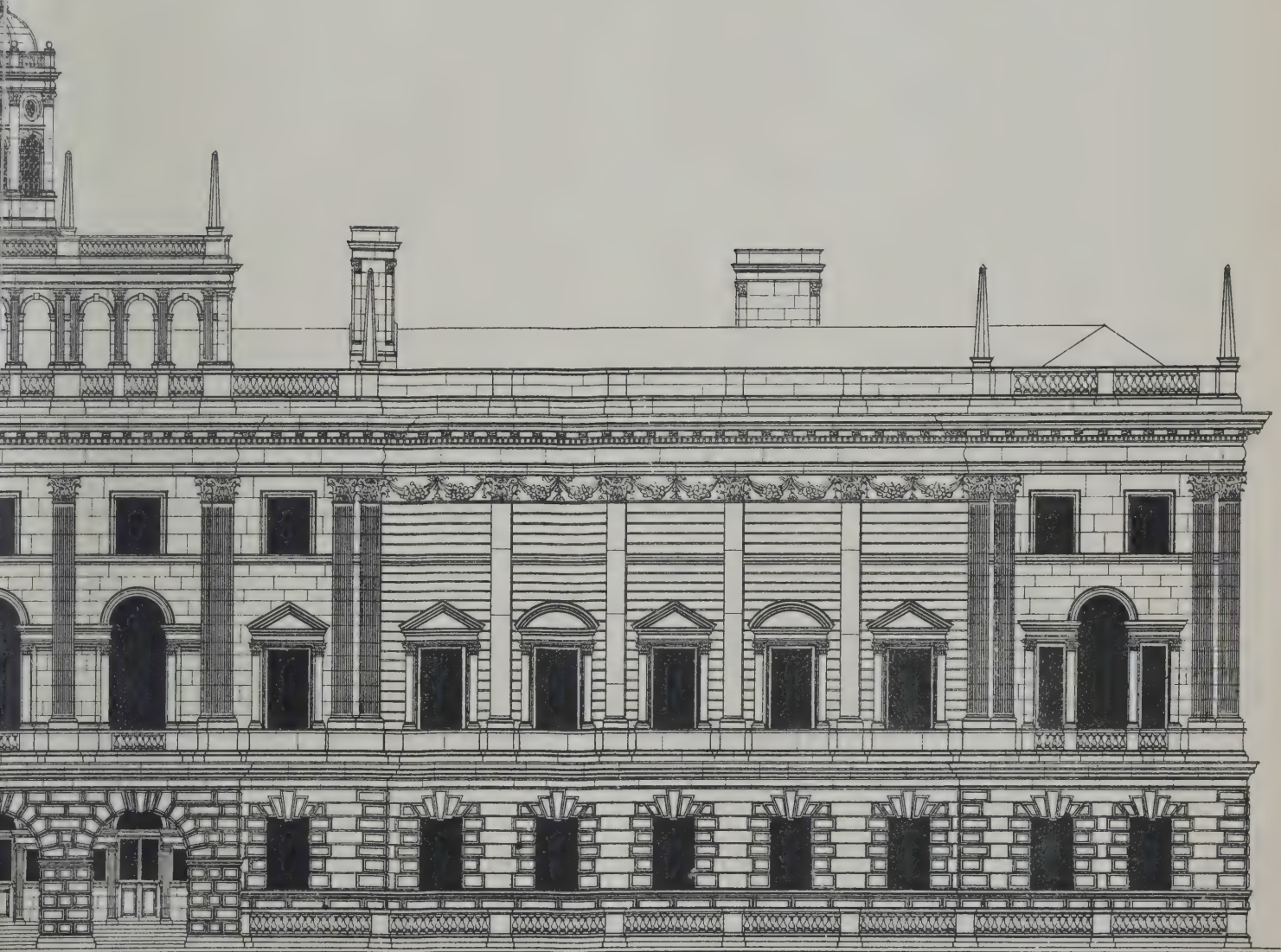


FRONT

DESIGN FOR AN  
AWARDED ROYAL ACADEMY GOLD  
By EDWARD



Jan 12<sup>th</sup> 1884.



ELEVATION

ACADEMY OF ARTS.  
MEDAL & TRAVELLING STUDENTSHIP.  
GEORGE HARDY.

*Sprague & Co. 22, Martins Lane. London E.C.*













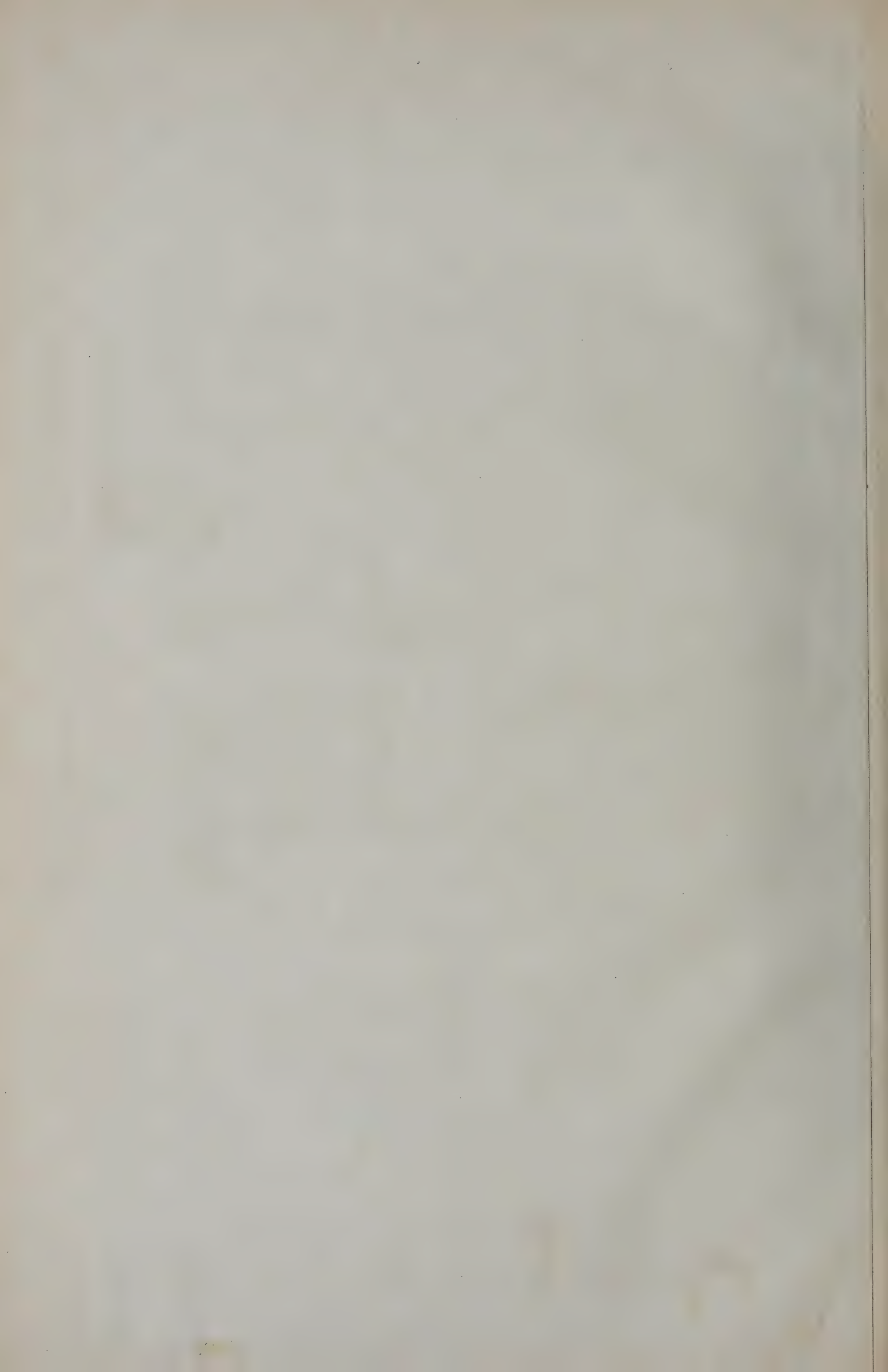




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ROYAL EXCHANGE ASSURANCE OFFICES PAUL MALL







## ILLUSTRATIONS.

THE DEPARTURE OF BALDWIN AND THE CRUSADERS.

THE event which has been depicted by M. GUFFENS on the wall of the Hôtel de Ville at Courtrai, was of some importance in the history of Flanders. For Count BALDWIN it was the first scene in a tragedy in which he was destined to be the principal actor. The time selected is the year 1202. A little more than a century had elapsed since the warriors of Western Europe had departed to take part in the first struggle for the possession of the Holy Sepulchre at Jerusalem. The city had been conquered, and the kingdom of Jerusalem established, with GODFREY of Bouillon as king. In fifty years the Christian power in Palestine was weakened, Jerusalem was threatened by the Mahommedans, and it was necessary to preach a second Crusade. There was unparalleled enthusiasm. All ranks were attracted, but the enterprise was a failure, and it is calculated that two hundred thousand people perished in Natolia, with as little apparent advantage to the cause as if they were so many flies. Jerusalem fell into the hands of SALADIN. It is difficult for us in the nineteenth century to realise the consternation which the news excited in Europe. In the St. Edmundsbury Chronicle it is related that "at the retaking of Jerusalem by the Pagans, Abbot SAMSON put on a cilice, or hair shirt, and wore under garments of haircloth ever after; he abstained also from flesh meats thenceforth to the end of his life." The Abbot was but following the general practice of making pain a reminder of what Christendom had undergone. Mr. CARLYLE sees in all this mortification something that is very noble; and from the depths of his pessimism he admires the earnest reality of it as marking an age when "glimpses of bright creatures flash in the common sunlight, angels yet hover doing GOD's messages among men; wonder, miracle encompass the man; he lives in an element of miracle, Heaven's splendour over his head." There was at once a third Crusade, and, after three years' fighting, a treaty of peace for a short term was concluded with SALADIN, who was allowed to retain Jerusalem. By his death, which dissolved the unity of the empire, it was supposed that all obstacles to the recovery of the city were removed. A large army of Germans was dispatched; but from want of loyalty in the commanders nothing was done. The accession of INNOCENT III. to the papal throne in 1198 gave new life to the enterprise. FOULQUES DE NEUILLY, following the example of PETER the Hermit and BERNARD of Clairvaux, urged upon men the duty of reconquering Jerusalem, and he was seconded by the eloquence of MARTIN LETZ and HERDOUIN. The great kings did not engage in the movement, for their states had suffered much from the former efforts, and the new Crusade was undertaken mainly by petty princes. In this way BALDWIN of Flanders became a crusader. He had at an earlier date shown his courage by taking the part of RICHARD CŒUR DE LION in the quarrel with PHILIP AUGUSTUS. An immense force was organised by him in his own country, and was joined to those of his brother-in-law, THEOBALD IV. of Champagne, LOUIS of Chartres and Blois, BONIFACE of Monferat, and other princes. BALDWIN, who was born in 1171, succeeded to his mother's possessions in Flanders in 1193. His wife was the daughter of the King of France, who wished to accompany him to the East. On joining the crusaders in 1202, BALDWIN appointed one of his brothers to be regent. He never saw Flanders again. It is not surprising that Mr. GUFFENS represents the Count with the sad expression of a man who is taking a last look of his country.

The great loss which attended a land journey was known, and it was resolved to try the experiment of travelling by sea; but for this purpose transports were necessary, and the Venetians and Genoese could alone supply them. Hitherto the Venetians had taken no part in the Crusades, and as traders they had an interest in the existence of the Mahommedans in the East. A deputation from the commanders was therefore sent to the Senate for the purpose of obtaining vessels to carry the troops. A bargain was struck. Galleys and men were supplied, and the old doge DANDOLO agreed to accompany the crusaders. One of the conditions was that the army should be first employed in conquering the town of Zara, in Dalmatia, which had revolted from the Venetians. It was easily overcome, and the strange spectacle was presented of crusaders staining their swords with the blood of their fellow Catholics. The champions of the Church were forthwith excommunicated by the Pope. But a more important

prize was coveted by the Venetians, and the Soldiers of the Cross were next directed, and it may be not unwillingly, to Constantinople, which was then the capital of a Christian Empire, and renowned for its riches. There they were also successful. Neither age nor sex nor religious profession was spared. The wealth that was seized was enormous, and GIBBON calculates that the share secured by the French pilgrims was "equal to seven times the annual revenue of the kingdom of England." The city possessed many masterpieces of ancient Greek sculpture; those in marble were destroyed, and the works in bronze were melted for the sake of the metal.

The rapacity of the rulers increased as time went on, and the next stage in the history of the Crusade was the election of Count BALDWIN as Emperor of Constantinople. The scene which followed is described by MILLS. The barons and knights, agreeably to the Byzantine custom, elevated the Emperor on a buckler, and bore him into the church of St. Sophia. When the pomp of magnificence and dignity was prepared, the coronation took place. The papal legate threw the imperial purple over BALDWIN; the soldiers joined with the clergy in crying aloud, "He is worthy of reigning," and the splendour of conquest was mocked by the Grecian ceremony of presenting to the new sovereign a tuft of lighted wool, and a small vase filled with bones and dust, as emblems of the perishableness of grandeur and the brevity of life. BALDWIN was granted one-fourth of the provinces; of the remainder a great part was seized by Venice, and the leaders of the expedition were rewarded in proportion to their importance. But the new rulers were unable to gain the affection of their subjects. They bestowed offices on their countrymen, and the hatred of the Greeks was excited by jealousy as well as by theology. On an invasion by Bulgarians the Emperor BALDWIN was captured in 1206. The result had best be described in the words of GIBBON:—

The manner of his death is variously related by ignorance and credulity. The lovers of a tragic legend will be pleased to hear that his hands and feet were severed from his body, that his bleeding trunk was cast among the carcasses of dogs and horses, and that he breathed three days before he was devoured by the birds of prey. About twenty years afterwards, in a wood of the Netherlands, a hermit announced himself as the true Baldwin, the Emperor of Constantinople, and lawful sovereign of Flanders. He related the wonders of his escape, his adventures, and his penance, among a people prone to believe and to rebel, and in the first transport Flanders acknowledged her long-lost sovereign. A short examination before the French court detected the impostor, who was punished with an ignominious death; but the Flemings still adhered to the pleasing error, and the Countess Jane is accused by the greatest historian of sacrificing to her ambition the life of an unfortunate father.

After a year's mourning, BALDWIN was succeeded in the emperorship by his brother HENRY, who reigned until 1216. With him the male line of the Counts of Flanders came to an end.

ROYAL EXCHANGE ASSURANCE OFFICES, PALL MALL.

WE give an illustration this week of the Pall Mall front of the Royal Exchange Assurance Offices, now in the course of erection from the designs of Mr. GEORGE AITCHISON, A.R.A. The frontage is narrow—not much more than 22 feet. On one side is the imposing mass of the Junior Carlton; on the other some common brick houses. A tall fanciful gable detaches the building from the club-house. The front is nearly all window, and the piers are enriched with engaged colonettes on three storeys, while the ground floor and attics have caryatides. These are to be modelled by Mr. J. E. BOEHM, R.A. The uniformity is relieved by two projecting balconies on the second floor, and by a small central porch on the ground floor. The front is of red Mansfield stone, but a little variation in colour will be got by means of granite, colour, and gilding.

The Board of Trade have informed the promoters of the South Eastern and Channel Tunnel Railways Bill, and those of the Channel Tunnel Railway Bill, that if the Bills which have been deposited are persevered with it will be the duty of the Government to oppose them in Parliament. The promoters will not, it is said, abandon their Bills.

An Early Work by Turner has been purchased in Sheffield for the small sum of 5s. The picture has been examined by Mr. Ruskin and is considered by him to be a genuine example.



## OFFICIAL NOTES ON FOREIGN TRADE.

THERE is a very considerable amount of house building going on in Constantinople, which may be accounted for in this way. The prices of all kinds of materials are exceedingly low, labour is plentiful and cheap, and the value of ground has gone down to less than one-half what it was five or six years ago. Under this combination of favourable circumstances there are few investments which have more attractions for the man of moderate capital. Two classes of houses give good returns; those which contain from eight to ten rooms, and which can be let for from 80*l.* to 100*l.* per annum, and large houses constructed in "flats," which are eagerly sought after by people of moderate means. The rent of these flats varies from 50*l.* to 100*l.* each according to situation and accommodation. First-class houses are no longer constructed, being considered bad property. Those which, ten years ago, brought in a rent of 300*l.* and upwards, can now be had for less than one-half. The rents still paid for shops in good positions is, however, something extraordinary, considering the general depression in trade.

One of the defects of Constantinople has been the insufficient quantity of water. The population, which is calculated at 1,100,000, has been supplied from the "bends," or artificial reservoirs of Belgrade, which yield 1,320,000 gallons daily in winter, and in summer 770,300 gallons. This quantity is only equal to 1.32 gallons per head, and in the suburbs the daily supply is not quite a gallon per head. In summer the price is 3*d.* and even 4*d.* per measure of 6½ gallons, and in the season water never sells at less than 1.6*d.* per cubic foot. This state of things will soon be altered for the better. A company has been formed, under the title of "La Compagnie des Eaux de Constantinople," by a group of twenty-one European banking and financial establishments for the purpose of supplying the city and its suburbs with water from Lake Dercos, and the numerous springs and streams which feed it. The yield will be between 5½ and 6 millions of gallons. The nominal capital is 800,000*l.*, divided into 40,000 shares, but no public emission of shares will take place until after the completion of the works. The daily supply will be increased so as to allow of about 7 gallons daily per head, and by the terms of the concession the price is fixed at 92 centimes the cubic mètre, or about 25 gallons for 1*d.*

Trade in Erzeroum is in the lowest condition that has been known for years. All merchants agree in declaring that there are no purchasers of any kind of goods except the barest necessities of life. After the war with Russia there was a certain amount of money in the city owing to the extravagant prices which the army of occupation paid for everything. But this spoil has gradually disappeared, and there is no method of replenishment of empty purses, commerce being at a complete standstill. Land is worth only a quarter of its value before the war, chiefly owing to the fact that the Mussulmans, who are the principal purchasers of land, suffered such heavy losses in the provinces that were occupied by Russia. They feel that there is no security of tenure in a frontier vilayet. Houses also in Erzeroum fetch half their real value, and sometimes even less. A house which cost 1,100*l.* about seven years ago was sold lately by auction, and, though in perfect repair, was knocked down for the sum of 450*l.* Buildings for military government and provincial purposes have been carried out to a great extent; also clinics, schools, and private buildings, although no longer so easy of sale or to let, are still being carried out, and the town has quite a different aspect than it formerly had. The small low houses have disappeared, and large buildings of four or five storeys have been erected.

In Königsberg the wood trade has made considerable progress, and promises to become much more important than formerly, although the port cannot compare with Memel and Dantzic in this branch at present. The shipments are retarded by the shallowness of the channel. Sales of wood goods in the town were difficult, on account of the depreciation in the value of houses and want of money among many builders. The newly-introduced timber import duties, the differential duty between rough-hewn wood and sawn wood goods, and the contemplated further increase of import duty and delay at the borders thereby occasioned, and the waste of time and hindrance in measuring, are pressing hard on the wood trade. The trade in cement has been very large of late, about 50,000 barrels a year are imported, chiefly of German make. Portland cement realises 8 marks per barrel of 180 kilos. A great deal went to Russia, where it is required in building the numerous fortresses at Goniads, Kowno, Warsaw, &c.

From St. Vincent it is reported that the municipal authorities have laid the foundations of a new municipal hospital, the building in use at the present time being quite inadequate to meet the requirements of the town and shipping. However, the work progresses but slowly, and will in all probability not be completed for some time to come. The same body have also erected a new parochial

school-house for girls, together with a residence for the mistress. The paving of the principal streets having been completed, that branch of the public works has been suspended for the present, but a large number of back streets still remain unpaved. No steps have as yet been taken with regard to conducting water into the town from the springs at Madeira, although competent engineers have declared in favour of the project. St. Vincent, therefore, remains dependent on St. Antonio for its water supply.

The manufacture of Portland cement has increased largely in the Boulogne district. The manufacture of iron gas and water pipes in Marquise, which was a few years ago one of the great industries of the neighbourhood, is on a much smaller scale than formerly. As soon as the iron ore of the district was exhausted it was found that the manufacture could no longer be carried on so successfully with imported iron and imported coal. The new company, however, still continues to work on a reduced scale, with the aid of importation of pig-iron from the north of England and iron ore from Spain.

The principal towns in Belgium will be shortly placed in communication with each other by means of the telephone; an advantage the benefit of which, to business men and to the public generally, cannot easily be over-estimated. A temporary experiment, by arrangements extending over a period of five days, was made lately between Antwerp and Brussels, the result of which is described as having been highly satisfactory. The subscribers were able to communicate with one another with perfect ease, and a voice of average strength could be distinctly heard at each extremity without any unusual effort being required on the part of the speaker. Communications have also been exchanged between Brussels, Antwerp, and London by wire and cable, and it is said that arrangements will be speedily entered into with Holland, by means of which a close system of telephonic intercommunication will be established between the two countries. The system adopted in Belgium is that introduced by M. Van Rysseberghe, Director of the Meteorological Department of the Brussels Observatory.

Manufacture in Servia is in its infancy. The Servian Government are doing all in their power, however, to promote and encourage it, and offer monopolies and exemptions from duty to foreigners who may desire to try investment of their capital in it. Among Servian textile manufactures are the Pirot carpets, which are woven with wool to any design, of any size, and in any variety of colours. The crimson colour usually predominates, and the carpets are woven so as to present exactly the same appearance on both sides. Though not thick they are exceedingly durable, and for that reason are to be seen on the floors, beds, and divans of all Servian houses of the better class. They cost at Pirot about 10*s.* per square yard. Besides the carpets of Pirot there are those of other places in Servia of a commoner and cheaper quality, but also very durable. For halls and corridors, goats' hair carpet is used about two feet wide, costing 2*s.* 6*d.* per mètre, and exceedingly durable. These are woven in the natural colour of the goats of the country, grey predominating.

## PUBLIC STATUES IN LONDON.

AN article on "The Statues and Monuments of London" is contributed by the First Commissioner of Works to the *Nineteenth Century* for January. In it a classification is given of all the memorial statues in London, whether in public places, in Westminster Abbey or in St. Paul's. Concerning the omissions among "open air statues," Mr. Shaw Lefevre writes:—

It will be seen, then, that the total number of statues is about fifty, of which eighteen are of royal personages, and of the remainder all have been erected within the present century, and by far the larger proportion in the last twenty years. There are no statues of the greatest of English warriors, of Edward the Third, or Henry the Fifth, or Blake, or Marlborough. There is none of Cromwell. Chatham is equally without tribute of this kind. Milton, in spite of his associations with London, has no recognition except that of a bust in the Abbey. To Dr. Johnson a statue has been erected at Lichfield, the place of his birth, but none in London, where nearly the whole of his life was passed and where he died. The statues by Foley of two celebrated Irishmen, Burke and Goldsmith, erected in front of Trinity College, Dublin, are among the very best works of art of modern times, but in London, where their lives were spent, there are no statues of them in the open air. It was at least to be expected that the Benchers of the Temple Inns would have done something in honour of one who was so long connected with the Temple, and who was buried in their church. A statue of Charles Dickens in some one of the many parts of London identified with his works would be appropriate. Compared with these it may well be doubted whether many of those to whom statues have been erected in the last twenty years are worthy of the honour. It is a question whether any statue should be



erected until ten years or more have elapsed since the death of the subject. This would avoid many which are decided upon in the excitement of grief and regret immediately after death. What is still more to be deprecated is the erection of a statue during the life of its subject, except perhaps in the case of the most eminent.

In any case it is not desirable that statues should be multiplied unduly. In the view of many people, London, by reason of its climate, is unsuitable for statues in the open air, at least without canopies. It may be replied to this that the suitability of a statue depends wholly upon the work itself. Really good works of art like the best of those which have been named are certainly not out of place even in London; they rise superior to the conditions of the atmosphere and to their environment. A bad statue, however, is intolerable; there is no escape from it; it adds to the gloom of its neighbourhood, it intensifies all other bad conditions, and is a public misfortune. A statue once erected in a public place can be removed only under most exceptional circumstances. Too great care, then, cannot be taken by the authorities in consenting to the erection of a statue. There is nothing of which it is more difficult to judge the effect in advance. The small model of a statue may please, the full-sized cast in the studio may look well, but when the final result in bronze or marble is put on its pedestal in the place of destination, the result may be eminently unsatisfactory, and perhaps to none more so than to the artist himself. It may be a question whether, before giving final permission for the erection of a statue, it ought not to be required that a model in plaster, coloured to represent bronze, should be placed on the intended site, and whether a committee of taste should not be the final arbiters in a matter so delicate and difficult.

Mr. Shaw Lefevre next describes the statues in Westminster Abbey, and advocates the removal of some of them. This leads to a consideration of the project of erecting a monumental chapel:—The fact is, that the available space in the Abbey is too small for what already exists there; and it is certain that in the future, monuments must either be reduced to the smallest busts, to be stuck up wherever a vacant corner can be found, and irrespective of their surroundings, as is now too often the case, or the demand for this national recognition must be refused altogether.

On the other hand, it would be a most serious misfortune that a break should be made in the continuity of this splendid roll of monuments to the great and illustrious men of the Empire, or in the gallery of monumental sculpture, in which so far all that are eminent in that line of art have hitherto been represented. The subject is one which has long occupied the attention of those most interested in the Abbey. It was one in which Dean Stanley felt the deepest concern. He felt, as all have done who are cognisant of the facts, and who appreciate the Abbey in its various functions, that an effort must be made to extend its limits and to give greater space for monuments, if not for burials in the future. Of the burials in the Abbey much might here be said. If it be advisable to continue them at all at Westminster, it is certainly most desirable that they should no longer be carried out within the Abbey proper, and that another and more fitting place should be found for them.

It is in this view that a proposal made by Sir Gilbert Scott found favour. I have already alluded to it in a former article on "London Improvements" in this Review. The proposal of Scott was to build a cloister, or rather a monumental chapel, to the north-east of the Abbey, along the line of the houses in Old Palace Yard and Abingdon Street, and communicating by a covered passage passing under the buttresses of the Chapter-house. The proposal would involve the demolition of all the houses in Old Palace Yard and in Abingdon Street as far as Great College Street, and the purchase of this property would cost about 200,000*l.*, a very large sum to expend in demolition.

For my own part I think that Scott's plan is open to some objection; the frontage of the chapel or cloister which he proposes would extend eastward beyond the extreme end of the Chapel of Henry the Seventh, and the interesting old Jewel Tower, at the back of Old Palace Yard would again be hidden behind it. I incline to think that any addition to the Abbey in this quarter should not extend beyond the east end of Henry the Seventh's Chapel. This would bring it into a line with the Jewel Tower. A monumental chapel might be constructed in conformity with this view on the site of the houses on the east side of the Little Cloisters, and united to the Abbey in the manner proposed by Scott. This would involve the demolition of the houses in Old Palace Yard only, at a cost of about 80,000*l.*

Supposing the chapel to cost about 50,000*l.* the total sum required would be 130,000*l.* Of this the main portion, it seems to me, should be subscribed by the public, if some wealthy benefactor could not be found to undertake it; and upon this condition, and speaking unofficially, I cannot but think there would be a strong claim for assistance to so great a cause, national, metropolitan, and ecclesiastical, upon the three bodies who represent these interests, Parliament, the Metropolitan Board, or whatever body may represent the whole metropolis, and the Ecclesiastical Commission, in which body the estates of the Chapter of Westminster, now producing an immense revenue, are vested. It is then in a joint operation between the public, in its capacity of subscribers to a great and necessary and beautiful work, and the three bodies I have

named, that the ultimate solution of this difficulty may be looked for.

Lastly, it is to be observed that such a plan, involving as it would the clearing away of the houses in Old Palace Yard and Poets' Corner, would be one of the most splendid improvements that could be carried out in this part of London. It would open out the south side of the Abbey, and disclose to view the beautiful Chapter-house, now almost completely hidden. It is not many years since the north front of the Abbey, or a great part of it, was similarly hidden from view; old prints show that there was a row of buildings on either side of St. Margaret's Church, opposite to the old Law Courts, from Bridge Street to the Abbey. In fact the greater part of Parliament Square was covered with houses. These have all been demolished, and the Square has been completely cleared within the last thirty years. The Abbey now stands out in all its beauty on this side. The removal of the old Law Courts, and the opening to view of Westminster Hall effected during the past year, has been another improvement of the same kind.

It is not too much to say that the panorama of buildings now seen from a point at the end of Great George Street, near to the statue of Peel, is one of the finest in Europe. On the extreme right stand the Towers of the Abbey, then the whole range of its nave, transept, and Henry the Seventh's Chapel, against which St. Margaret's Church stands, not without advantage in breaking this long line, in supplying another tower, and in giving the means of appreciating the size of the Abbey. The Victoria Tower is then seen in full, down to its base, which was formerly scarcely visible from any point; then comes Westminster Hall, with its ancient buttresses, the contrast of whose simplicity and grandeur with the ornate frontage of the new palace, and with Henry the Seventh's Chapel, is very striking, and not ungrateful to the eye. The picture ends on the extreme left with the graceful Clock Tower. What can be more beautiful or more full of interest than this range of buildings!

Parliament Square will be further improved when the street leading to it is widened uniformly with Whitehall, as is now proposed, and when a handsome block of buildings is erected along the new line with a frontage to the Square.

Little will then remain to be done in this quarter, except to open out the view of the Abbey on its south side. The proposed monumental chapel, the Chapter-house, and the Abbey will then stand opposite to Barry's beautiful front of the House of Lords and the Victoria Tower, and the "place" on this side of the Abbey will be not less striking than that on the other side.

When the wealthy people of London rise to a conception of the dignity and beauty of the great city in which they live, and from whence many of them derive their great incomes, and of their duties as citizens, so far better understood and acted upon in other great cities, it is certain that this improvement will be one of the first which will be accomplished. The Abbey, with its wealth of monuments, the Hall, and the Parliament House of Westminster will then form a group worthy of this, the *μεγίστη* of the British Empire.

## THE PROPOSED RAILWAY UNDER THE PARKS.

THE following circular, issued at the instance of Mr. R. W. Perks, solicitor to the Metropolitan Railway Company, has been forwarded to all the trades and friendly societies, and has been put down for discussion by the executive councils at the principal working men's clubs during the coming week:—

I beg respectfully to call the attention of your society to a proposed extension of the Metropolitan Railway from Edgware Road and Paddington to Westminster, and to express a hope that the members of your society will support a project which is calculated so largely to increase the travelling facilities of the working classes of London. I should not venture to adopt the somewhat unusual course of directly appealing on behalf of the company I represent to the leaders of the trades societies of the metropolis were not a vigorous effort being now made in certain quarters completely to mislead the public as to the character of the proposed railway, as to the conditions under which it is to be made, and as to the feeling of the working classes of the metropolis with respect to it. During the last twenty years the Metropolitan Railway Company (irrespective of the District Railway Company) have conveyed over their lines upwards of 900,000,000 passengers, and are now carrying 72,000,000 every year, of whom nearly 80 per cent. are third-class passengers. The average price per passenger of all classes together is under 1*½d.* per journey. The proposed Extension Railway will be three miles long. Commencing at Paddington, it will pass under the Edgware Road to the Marble Arch, Hyde Park, where there will be a station. Thence the railway passes at a very considerable depth below the surface—of course in tunnel—to Albert Gate, Knightsbridge, where there will be another station. The line then passes, still under tunnel, under a portion of the Knightsbridge Road, and thence beneath Hyde Park Corner, underneath the Green Park and St. James's Park, to Westminster. It would be impossible to select any other route for the construction of a direct north and south route through the western half of the metropolis which would during construction



cause less inconvenience to the public, less interruption of traffic, and less destruction of property. The more economically a railway can be made, the greater are the advantages to the travellers using it in lower fares and better accommodation. The conditions under which the railway will be permitted to be made beneath the parks have been very carefully framed by the Government. Ventilators or openings in the parks are prohibited. The railway is to be made at such a depth as to prevent vibration. Care has been taken to avoid the trees. The railways are to be made in winter months. In Westminster the company have, in connection with their terminal station, to carry out public improvements which, if undertaken by the Metropolitan Board of Works, would alone cost the ratepayers of London at least 200,000*l.* They propose to widen Parliament Street to a line with the Foreign Office, to widen and improve Charles Street, make a new and wider street in place of King Street, and construct a new one parallel with Great George Street. The company propose to expend upwards of one million sterling, the greater portion of which will be expended in works and wages. The new buildings which will subsequently be erected upon the lands at Westminster will probably involve an additional expenditure of upwards of 600,000*l.* for work and material. In view of the above facts, the working classes of London will, it is hoped, support this important metropolitan improvement, and secure for the people new, rapid, and cheap means of locomotion.

### THE TIMBER OF LEBANON.

TWO inscriptions have been lately found on Lebanon by M. Pogon, Assistant-Consul of the French Republic at Beyrout, of which M. Clermont-Ganneau gives an interpretation. They are engraved on the rock in one of the wildest valleys, and measure about 5½ metres in breadth by 2.8-10ths in height. Each one is accompanied by a basso-relievo. That of the first inscription represents a personage with the Assyrian tiara as head-dress, turned towards the left, and seizing an animal standing erect on its hind legs, possibly a lion. Behind this personage there must have been the image of a divinity; it has completely disappeared, but one can still read underneath:—"To the goddess. . . Who exalts. . . Who inhabits the temple of Goula, the temple. . ."

The basso-relievo of the second inscription represents a man in adoration before a tree, with a rather curiously-shaped pointed cap on his head, somewhat similar to the mitre, closed at the top, which is worn nowadays by bishops.

The two inscriptions each contain a different text. They commence by the titles of Nebuchadnezzar:—"Nebuchadnezzar, King of Babylon, the Illustrious Pastor, the servant of Merodak, the great Lord, his Creator, and of Nebo, his illustrious son, whom his Royalty loves."

The two inscriptions do not comprise any historical passage. The king merely gives an account of the buildings he is having constructed in Babylon.

M. Pogon is of opinion that these texts mark the site of a timber-yard, where trees were cut to be sent to Babylon. The name of Lebanon is repeated several times in mutilated sentences, where it is a question as to the wood employed in Nebuchadnezzar's buildings.

M. Clermont-Ganneau considers the supposition to be very probable. In the first place, we are aware, from the other inscriptions of Nebuchadnezzar which have reached us, that the great King of Babylon employed a considerable quantity of wood for his sumptuous building of temples and palaces. In one of these inscriptions, preserved in the British Museum, he even says expressly "that he has employed for the woodwork of the Chamber of Oracles the largest of the trees which he has had conveyed from Mount Lebanon." At all times, moreover, Lebanon appears to us as an inexhaustible source of building timber. Everyone remembers the timber—cedar and fir—cut in Lebanon and sent by Hiram, King of Tyre, to David and to Solomon for the construction of the Temple and the Royal Palace at Jerusalem.

The prophets show us, on different occasions, the forests of fir trees covering the slopes of this celebrated mountain as the "Glory (*Kabod*) of Lebanon." It is from Lebanon that the Phœnicians, and after them the conquerors of Syria, obtained the materials for their naval constructions. Lebanon, which had in this respect furnished precious resources to Alexander and his successors, played the same part until the Roman epoch. All that part of High Lebanon comprised between Sannin and the Pass of the Cedars, in the middle region of Toula, as far as Semar Jebel, is still covered with hundreds of Latin inscriptions, engraved on the rock, and reserving for the State, as M. Renan has shown perfectly, in the name of the Emperor Hadrian, the four species of trees necessary, according to Vegetius, for the requirements of the Imperial fleets—the pine, the larch, the fir, and the cedar (*Imperator Hadrianus Augustus: arborum genera iv.; cetera privata*).

It is curious to compare this epigraphic document with a verse of Isaiah (lx. 13), which appears to offer a striking similarity to it—"The glory of Lebanon shall come unto thee, the *berosch*, the *tidhar*, and the *teashour* together, to beautify the place of my sanctuary." The *berosch*, the *tidhar*, and the *teashour* (the

improbable box of the Authorised Version) seem designated as four resinous species, upon the botanical identity of which there is a difference of opinion. Add to these three trees the cedar comprised in the parallelism, under the usual metaphor of the glory of Lebanon, and we obtain the very four species which are mentioned in the inscriptions of Hadrian and correspond with those enumerated by Vegetius.

It may not be impossible that the two inscriptions of Nebuchadnezzar may be referred, at an interval of several centuries, to a similar order of ideas, and concern in all or part the preservative measures taken by the king for the forests, whose working was the privilege of the Crown. Nebuchadnezzar is not, moreover, the first foreign conqueror who has utilised the riches of Lebanon. On the basso-relievos of the bronze gates of Ballawat, one sees the Assyrian soldiers of Shalmanazar II. carrying down beams of cedar wood from Lebanon. We know, from other sources, that this king, after having received the tribute of Tyre, Sidon, and Gebal, had his statue erected in Lebanon, where he had been to get cedar wood on the mountain of Bahli-Rashi. It is perhaps also in the neighbourhood of Hermel, and not, as was thought, at the mouth of the Dog River, that it would be advisable to seek the monument of Shalmanazar II. executed on this occasion.

One might easily multiply these comparisons borrowed from the Assyrian documents, such as the inscription of Assurnatzir-Pal, discovered at Ballawat by M. Rassam, and recently studied with success by Mr. E. A. Budge. One may read at the lines 24-27, "To the land of Lebanon I went; beams of cedar (*erini*), *surman* wood, cypress wood (*dapran*) I cut down." However that may be, the inscriptions and basso-relievos of Nebuchadnezzar are worthy to be put beside the well-known monuments left in Syria by the Assyrian and Babylonian conquerors, as testimonies of their passage through Phœnicia, not far from there, in the valley of the Dog River, north of Beyrout. The discovery of M. Pogon proves that Lebanon has not yet said its last word, and that an accurate exploration of this vast tract of mountains would, perhaps, produce new and still more valuable discoveries of the same kind. We must not forget that there remains to be found, among other things, the great Phœnician sanctuary, where the mountain, itself deified, was adored under the name of Baal-Lebanon. The existence of this topic Baal is attested by the bronze cup dedicated to him by a *soken* of an undetermined city, namesake of the classical Carthage, a personage whom M. Clermont-Ganneau formerly demonstrated to have been a high functionary of Hiram, King of the Sidonians.

### ARTISANS' DWELLINGS.

AN important letter has been addressed by the Secretary of the Local Government Board to the Clerks of the Vestries and District Boards of the metropolis. After enumerating the various statutes which have reference to artisans and labourers' dwellings, the letter next explains the procedure that is to be adopted for the abatement of nuisances. The letter then continues:—"With regard to the Artisans' Dwellings Acts, 1868 to 1882 (Mr. Torrens's Acts), I am directed to state that the primary object of these Acts is to secure the improvement or demolition of houses which are "in a state dangerous to health, so as to be unfit for human habitation," but they also empower the local authority to deal with any "obstructive building"—*i.e.*, a building which, although not in itself unfit for human habitation, is so situated that, by reason of its proximity to other buildings, it stops ventilation, or otherwise makes or conduces to make such other buildings to be in a condition unfit for human habitation, or prevents proper measures from being carried into effect for remedying the evils complained of in respect of such other buildings. Under these Acts, on the report of the medical officer of health that any premises are unfit for human habitation, the authority are to ascertain from a surveyor or engineer whether the causes of the evils can be remedied by structural alterations and improvements, or whether the premises ought to be demolished. In the former case the authority are empowered to require the owner to execute the necessary structural alterations, and, on default, they may order the closing or the demolition of the premises, or may themselves execute the necessary works at the expense of the owner. If the report of the engineer or surveyor is to the effect that the premises should be demolished, they may order the demolition of the premises, and, on default of the owner, may themselves take down and remove them. The authority may in like manner require the removal of an "obstructive building," as defined above. When, however, an order is made on an owner for the execution of works or the demolition of a building which is unfit for human habitation, the authority may be required by him to purchase the premises. Where the authority thus acquire lands, they or their lessees are to hold the property on trust, first, for providing the labouring classes with suitable dwellings within the jurisdiction of the authority by the construction of new buildings or the repairing or improvement of existing buildings; and, secondly, the opening out and widening of closed or partially closed alleys or courts inhabited by the labouring classes, by pulling down any building or otherwise, leaving such open spaces as may be necessary to make the alleys or courts healthful.



As regards the Artisans and Labourers' Dwellings Improvement Acts, 1875 to 1882 (Sir R. Cross's Acts), the Board directs me to state that, although under these Acts no duties are expressly imposed on the authority (the Metropolitan Board of Works being the authority under these Acts in the metropolis, except in the City of London), the Board think it right to draw attention to their provisions, as it devolves on the medical officers of health of the vestries and district boards to make the official representations on which the improvement schemes are based. The Act of 1875 recites:—"That various portions of many cities and boroughs are so built, and the buildings therein are so densely inhabited, as to be highly injurious to the moral and physical welfare of the inhabitants; that there are in such areas a great number of houses, courts, and alleys, which by reason of the want of light, air, ventilation, or of proper conveniences, or from other causes, are unfit for human habitation, and fevers and diseases are constantly generated there, causing death and loss of health, not only in the courts and alleys, but also in other parts of such towns: that it often happens that, owing to the above circumstances, and to the fact that such houses, courts, and alleys, are the property of several owners, it is not in the power of any one owner to make such alterations as are necessary for the public health; and that it is necessary for the public health that many of such houses, courts, and alleys should be pulled down, and that such areas should be reconstructed, and that, in connection with the reconstruction of those areas it is expedient that provision be made for dwellings for the working-class who may be displaced in consequence thereof."

This Act and the amending Acts, it will be observed, contemplate the dealing with whole areas when the houses are so structurally defective as to be incapable of repair, and so ill-placed, with reference to each other, as to require to bring them up to a proper sanitary standard, that they should be demolished and reconstructed.

With regard to the Labouring Classes Lodging-houses Acts, these Acts provide the means by which any parish with a population of 10,000 persons, or two or more neighbouring parishes, in combination, having an aggregate population of not less than 10,000 persons, may constitute Commissioners for the purpose of providing lodging-houses for the labouring classes. The Commissioners may purchase or rent land, and on such land erect buildings suitable for lodging-houses for the labouring classes, and convert any buildings into lodging-houses for the labouring classes, and may alter, enlarge, repair, and improve the buildings, and may fit up, furnish, and supply them with the requisite furniture, fittings, and conveniences. The Commissioners may also contract for the purchase or lease of any lodging-houses for the labouring classes in their parish, and may appropriate the houses to the purposes of the Acts with such additions or alterations as they deem necessary.

It will be seen from the foregoing statement that the local authorities have already large powers vested in them for dealing with insanitary dwellings of the labouring classes, and the Board desire to impress upon the authorities the responsibility which consequently attaches to them, and to urge them, by a vigorous exercise of the powers with which they are entrusted, to secure an improvement of the dwellings of the class to which attention has recently been directed.

Sir R. A. Cross contributes an article to the *Nineteenth Century* on the subject, in which he says:—"What then is the sum and substance of the whole matter? First, as to new buildings, we must take care that houses in future shall be properly built in the first instance, and strictly enforce the Metropolitan Building Acts. This is a matter of administration of existing law. As a matter of legislation, strengthen these Acts if necessary, and without delay give like powers to local authorities in the suburbs. Secondly, as to the maintenance, &c. Houses though properly built will soon become a nuisance if not properly maintained. Property has its undoubted rights. As a first principle of justice let these rights be properly protected. Property has also its undoubted duties; let us take equal care that these duties be properly performed. Mr. Chamberlain is right here when he says, "After all that has been said it remains certain that much more is capable of being done under this legislation than has yet been undertaken, and it will be the duty of the departments concerned to use the power conferred upon them to repair the supineness of the local authorities where these can be shown to have neglected their obligations for this purpose. However, the Government must have the hearty and consistent support of public opinion. The sanitary provisions of the law must also be duly enforced against occupiers as well as owners. This is a matter of administration only, fresh legislation is not needed. Thirdly, as to old buildings. The old slums and insanitary houses must be got rid of—as economically as may be done, certainly—but they must go, the sooner the better, but only with convenient speed, or overcrowding will most certainly follow. The neglect of many years cannot be repaired in one. On this general head his answer is administration, not fresh legislation. Lastly, as to the question of rehousing. No legislation is here wanted. What is wanted is patience, perseverance, determination, firmness, so that these people may never be taught to forget that they must rely upon themselves, and encouragement in every legitimate way to those who are willing to invest money at a fair but moderate rate of interest. Among local

authorities themselves let us hope that there may be found willing and ready hearts, men alive to all the necessities of the case and earnest in pressing forward measures of administration necessary for the work, with energy and never-flagging exertion, though with prudence. Let us also hope that among the general public some may be found willing to join hand with hand and to stand shoulder to shoulder with the object of pressing on the work wherever work is needed. And above all, let us hope that many will thus work with the express object of making the people who live in these miserable dwellings feel that there are those who really care for them. These people are to be won, and they are worth the winning, and those who help to win may rest assured that they themselves will in the largest, highest, noblest sense as surely gain.

### SIR JOSHUA REYNOLDS.

THE following character of Sir Joshua Reynolds by his friend William Jackson may have interest at the present time, when so many of the artist's works have been brought together. It appeared soon after the artist's death:—

Sir Joshua had the reputation of being a man of genius and knowledge, in his profession and out of it—to deny this would be absurd, but our assent must not be an implicit faith. I will first inquire into his merits as an artist, and then as a man of general science.

He began his profession as a portrait-painter, and his works were soon distinguished by an elegance of design that had not been seen in England since the time of Kneller. To balance this excellence, his likenesses were frequently defective, and his colouring cold and weak—but this must be considered only as the general character of his performances at that time; for even in his earliest days, there were instances of his producing pictures of considerable merit.

A very few years had elapsed, before it was observed that his pictures were changed from their original hue, and the change in some was so great as to occasion a belief that the colours were gone off. Persons who are ignorant of the mechanical part of painting, reported that Reynolds knew not how to fix his colours, and that his pictures in a short time would cease to exist. As this matter has never been understood, I will stop a moment to explain it.

The dead-colouring of his pictures at this period was little else than flake, Prussian blue, and lake. All the laying-in consisted of these three tints. When the picture was quite dry, he gave it a warm glaze, which supplied all that was originally wanting, and produced a harmony in the whole, which was very agreeable and seducing to the eye when fresh done, but after a while the drying-oil (sometimes exchanged for varnish) with which the pictures were glazed turned dark, and by degrees grew more and more obscure, until the effect was as bad as if they had been covered with a dirty piece of horn. There are great numbers where the face can scarce be distinguished, and where the drapery is entirely hidden with this brown crust.

The colours then, are not gone off, but imprisoned—they are obscured beyond the reach of art to restore; and all pictures of this description will continue to grow worse and worse until the change of the oil, or varnish, has attained its maximum. This practice (of depending so much upon glazing) occasioned the painters to whisper that Reynolds did not paint *fair*, and that he dealt too much in trick. I dare say that the severest censures came from himself, and he at last grew tired of a practice which he knew must obstruct his progress to fame, and began, at last, to paint *honestly*.

The first picture that I recollect, after this change in his manner, was the portrait of the Lord Primate of Ireland—admirable in every respect. It was followed by many others truly excellent; and he continued in this style for many years.

As he possessed some pictures of Rubens, and might see as many as he pleased, it was difficult not to be seduced by their splendour. I once heard him say, "that a single picture of Rubens was enough to illuminate a room!" There is something like an emanation of glory from a fine picture of this master, which is felt and adored by a kindred genius. In one of the churches at Antwerp is a picture of Rubens, at the High Altar, which seems to be seen by its own light, at the farther end of the church. This magic of colouring was the favourite pursuit of Sir Joshua for the last ten years of his life; but, like other eager pursuers, he was not always in the right track. He may surely be supposed wrong, when, to obtain force, he loaded his lights with so great a quantity of colour that the different layers and touches frequently separated from the ground, merely by their weight.\* This excess he wisely abandoned, and long before his death he considered pictures, not as models, but surfaces.

It was at this period of his practice that he introduced the red

\* I once heard him *blessed* by a housemaid, who said (wiping the floor) "that the stuff which was always falling from that great picture made the room in a perpetual litter! I wish it would all come down at once!"



shadows of Rubens; which, though unnatural, are the chief cause of the splendour of the pictures of that master. Gainsborough once dealt in red shadows; and as he was fond of referring everything to nature, or where nature was not to be had, to something substituted for it, he contrived a lamp with the sides painted with vermilion, which illuminated the shadows of his figures, and made them like the splendid impositions of Rubens.

After Sir Joshua had abated something of the violence of these shadows, he was in the zenith of his art. It was at this period he produced his *Venus* and the *Death of Cardinal Beaufort*, which will make his name equal with the greatest masters. Of the *Venus* there is a duplicate with some small variation. The colouring is at least equal to Titian, but much superior to that painter in elegance of design. The *Cardinal Beaufort* has a warm glaze, which is rather too apparent.

He had tried, if not *all* things, yet, *many* things, and held fast those which were right—but in one circumstance he was ever wrong. In common with Vandyck, and a host of other painters, he had two, and sometimes three different points of sight in the same picture. I have elsewhere \* demonstrated the falsity of this practice in a scientific view, and its ill effect in every sense. A whole-length portrait of a child, with an horizon no higher than the ankles, gives one the idea of an infant as tall as a steeple, which is discordant and ridiculous—one of his prettiest pictures was a child with such an horizon.

† The above observations on colouring apply equally to his portraits and histories. The first historical subject, in point of time, that occurs to me, is *Garrick between Tragedy and Comedy*—which is a modernising of Hercules between virtue and pleasure. It was painted long before the reformation in his colouring; but, notwithstanding that disadvantage, it is so perfect in all other respects, that it must be considered as one of the happiest efforts of his pencil.

It is not my intention to enter upon a criticism, or even catalogue of his performances, or indeed to mention any picture, unless it contains some peculiarity by which a more correct judgment may be formed of his skill, or the want of it. Suffice it then to say, that there are trifling defects in most of them, which an ordinary genius might have avoided, and transcendent beauties, which few, perhaps none, could have reached but himself. The *sketch* † of the infant Hercules I have ever considered as the first production of his pencil, and the greatest effort of modern art.

He frequently painted historical portraits—one of the best is that of Mrs. Siddons in the character of the Tragic Muse—it has grandeur in the conception and execution—but the sublimity of this picture is much abated by the abominable chair, which is so ugly and discordant, as to force our attention to such a subordinate circumstance; nor is that the worst, for one of the odious knobs cuts the line of the arm, and substitutes a disagreeable break, where everything should be broad and grand. I very much dislike the effect of the chair in the King's portrait at the Royal Academy; although it be the coronation chair, we should observe that when the King sat in it the whole was richly covered; as a plain chair, it is scarcely good enough for a country barber's shop, where I heartily wish it had been sent before the imitation occurred, which has so much hurt this capital performance.

In one of his early historical portraits, the idea seems to be a reproach instead of a compliment; he painted Lady Sarah Lennox as sacrificing to the Graces. A little examination of the subject will, I believe, show that it was a wrong conception. A poet once carried his verses to a friend (says Addison, from whom I take the story) who returned them with advising him "to sacrifice to the Graces"—plainly insinuating that he thought his poetry destitute of elegance, and that he should endeavour to propitiate the deities who were unfavourable to him; the application is obvious.

About the beginning of this century was a painter in Exeter called Gandy, ‡ of whose colouring Sir Joshua thought highly. I heard him say that on his return from Italy, when he was fresh from seeing the pictures of the Venetian School, he again looked at the works of Gandy, and that they had lost nothing in his estimation.

It has been observed that Sir Joshua was shy of painting feet, and seldom ventured beyond the toe of a shoe peeping out from a petticoat—there is some reason for this remark—but many things might be offered to excuse, though not sufficient to defend the practice.

There are fewer drawings by this great artist than by any other of eminence. Perhaps, prevented by more important occupations,

\* In the Thirty Letters.

† I call it a sketch, because it was evidently a study for the great picture, but it was complete in every respect. Surely one of the grandest characters that ever mind conceived, or hand executed! If the rest of the figures had been only a woman or two, and in the same style, the infant would have kept its consequence, which is now lost amid a group of figures that offend probability, and destroy the effect of the picture.

‡ There are many pictures of this artist in Exeter and its neighbourhood. The portrait Sir Joshua seemed most to value is in the Hall belonging to the College of Vicars in that city, but I have seen some very much superior to it.

or for want of early practice, he might not possess the faculty of producing effect by chalks, washing, penning, or any other of the numberless methods by which drawings are made, the great merit of which consists of effect quickly produced. This facility cannot be attained, however good our ideas may be, without immense practice. Gainsborough was for ever drawing, and had this facility; but there are not many proofs that, in this sense, Sir Joshua drew at all.

His judgment of pictures differed from connoisseurs in general; was peculiar, and his own. Very moderate ones (to the common judge) he has spoken highly of; and very good ones (upon the usual principle) he has much undervalued. His own collection (with some illustrious exceptions) and the little attention paid to Ralph's exhibition, seem to justify this remark. Fifty quotations from as many different authors will never make the *Joconde* of Leonardo da Vinci worth fifty pence—the same may be said of the *Leda* of Michael Angelo, and of many others which wanted other requisites to make them of value. But it should be observed that an artist frequently buys a picture for its possessing something that is of use to *him*, and which is undiscernible by the common eye—and this accounts for his having many pictures, the merit of which was only known to himself.

It was not apparent that Sir Joshua was a scholar, in the usual acceptance of the word, but his conversation and writings showed a mind strongly tinctured with modern literature and refinement. There is much ingenuity and originality in all his academic discourses; perhaps there would have been more of both, if he had dared to shake off the fetters in which long literary slavery has confined us. Where he has done so, as in his Notes on Fresnoy, and his Eloge on Gainsborough, it is evident that he could think, and think justly, for himself. His style is simple and unaffected, and perfectly expressive of his ideas, which, in fact, is saying everything. Those who thought his discourses had been corrected by Dr. Johnson, were absurd in the extreme. Sir Joshua knew perfectly well that Johnson was the last man in the world for such a purpose, and, besides, must be confident that he himself was fully equal to the expression of his own thoughts. Johnson and Sir Joshua, it is true, were intimate friends; but they were as unlike in everything as two sensible men could be. This matter admits of proof—their writings bear not the least resemblance to each other in subject, manner, or style.

Whatever defects a critical eye might find in his works, a microscopic eye could discover none in his heart. If constant good-humour and benevolence, if the absence of everything disagreeable, and the presence of everything pleasant, be recommendations for a companion, Sir Joshua had these accomplishments. His unfortunate deafness occasioned a practice of loud speaking at his table, which to those who were unused to it was very unpleasant; but it was, notwithstanding, the constant resort of the first people in England for rank and talents, by whom Sir Joshua was esteemed and beloved, and this is the utmost to which man can attain. The great, the wise, the ingenious, and the good, ever considered it as an honour to be known as the friends and intimates of Sir Joshua Reynolds.



#### Royal Institute of British Architects.

SIR,—In your current number you allude to the changes to be proposed at the Institute on Monday next. Would you allow me to inform your readers that the suggestion I have to offer is, that of the fifteen elected members of Council not more than twelve should be eligible for re-election, so that on the list of votes any old members in excess of twelve would be passed over in favour of new members?

This, while it avoids "the enforced retirement of members of Council annually by rotation," will place on that body each year three members who have not served during the previous year.

I am, Sir,

Yours obediently,

LACY W. RIDGE.

7 Upper Woburn Place, W.C.:  
January 3, 1884.

#### The Institute Council.

SIR,—On Monday night another attempt will be made to reform the Institute (for that is synonymous with a reform of the Council), and let us pray that it will be more successful than those of past years. I think it may be safely alleged that a more inoperative Council than the present never sat in Conduit Street. Can any one call to mind a single useful action that has been done by them during their term of office? They are not likely to hide their good deeds, and if they rendered service to the profession we should all hear of it without loss of time. It was with curiosity I



awaited the President's last address, in the hope that something might be discovered about the work of the Council. The address is curious as being a most astounding example of egotism; but what did it say about the year's work of the Council? That is easily answered. First, we were informed of an arrangement by which Scottish candidates for the Associateship may be examined in Glasgow; secondly, it was related that there was some correspondence with the Manchester Society about voting by ballot; and, thirdly, there was an account of an interview with a few members about the constitution of the Council. In those three facts we have apparently the sum total of the Council's activity. If nothing else was described, I think it may be concluded that it was because nothing else was done, and the Institute may well be amazed at such an exhibition of zeal. Small as it is, I believe it exceeds last year's work.

When I turn to my copy of the "Transactions," I find that it also testifies to the do-nothingness which prevails among the Council. If the opening address and the address on the presentation of the gold medal are excluded, there remain twelve papers. What part did the Council take in the preparation or the discussion of them? Mr. P'Anson, Vice-President, composed one, and offered a few remarks on another paper. Mr. Christian spoke once, and that was all. The laborious exertions of the Council will be more evident by applying a foot-rule to the volume. It contains in all one hundred and twenty-six pages. We are indebted to the President, Vice-President, Council and Secretaries, for contributing between them twenty-one pages, including the Presidential addresses, or nine pages if they are excluded. Is it right that such a state of things should be allowed to go on?

I fancy I am not the only member who believes that if there is to be reform it must be a thorough one, and that tinkering will not do now. It is absurd to expect that the introduction of two or three new members of Council will remedy the lethargy which in a mysterious way appears to be transmitted from one Council to another. Why should not the whole Council retire? It may be objected that new men would be ignorant of the traditions of the Institute; but that is nonsense. There are no mysterious secrets bequeathed from the past, and ordinary business men would be competent to take part in the work of the Council without coaching. A more important difficulty is the position of the provincial members. Two of them, I understand, have taken little interest in the efficiency of the Institute since they were elected, but the others have endeavoured to do their duty under great difficulty. But for the sake of the Institute it would be better if the latter agreed to a temporary absence from the Council. Better representatives than Mr. Worthington, Mr. Frazer and Mr. Honeyman could not be easily found, and they are pretty sure to be elected hereafter. At present representatives of the provinces are unable to attend all the meetings, although their presence is indispensable. Would it not be wiser at the present juncture if Liverpool, Manchester, Leeds and Glasgow selected local men who have settled in London to represent them on the Council, even if the arrangement were only temporary? The influence of the provinces should count for much in the arrangements that are likely to be made.

In the new Council it would be well to have some of the men who have guided the Architectural Association to its present position; and as it will be no easy task to overcome officials who would preserve the existing state of things, a man or two disposed to be combative would be an acquisition. The reform of the Institute will never be accomplished by elegant nonentities. I observe that the present juncture has called forth advice from Professor Kerr. He may desire to have a share in the government, but he is never likely to be gratified. Prudence of a very different kind to his is now needed at the Institute.

Yours obediently,  
A PLAIN SPEAKER.

#### Christmas Cards.

SIR,—In your "Notes and Comments" of December 29, 1883, your date "as to the origin of the custom of sending Christmas cards" is seriously at fault, inasmuch as I have used them yearly since about the year 1842, when I bought some for the first time of ever seeing anything like them—in fact, I had never heard of or seen such a thing as a Christmas card. I bought a quantity—some coloured and some in outline only. The coloured were one shilling, and in outline sixpence each. The design was a family group having a Christmas dinner, showing the *paternal* at the head of the table with a glass of "port" in his hand, as he stood to propose "A Merry Christmas and a Happy New Year." I have written for information as to the author and publisher. Should I succeed in getting the names, I will send them that you may publish them if you think well to do so.

1 Manor Place, Sunderland : MARTIN GREENER.  
Dec. 31, 1883.

#### The Government Art Schools.

SIR,—May I be allowed, in answer to your correspondent "A Young Artist," to express the great disgust I feel for the crude and undigested remarks he makes about the badness of everything artistic as practised in England.

As a practical teacher of art in every branch, and to all sorts of people, both by the Government system, and, in deference to private requirements, by a system of my own, I deny that the Government system has been barren, but, on the contrary, it has been productive of all sorts of good to all sorts of people, and my impression is that "A Young Student," not being himself very capable or persevering, has got discouraged at the severity of the training imposed by the South Kensington system, which is not made up of stipple and time, but of painstaking industry, and completeness of study, without trick or conventionality. This is not a vague statement of mine. The facts are being practically stated every day in all the schools of art in the kingdom.

I am, Sir,

Your obedient Servant,  
HERBERT GILBERT.

Lancaster School of Art :  
Dec. 26, 1883.

#### NEW BUILDINGS.

**Newcastle-on-Tyne.**—New premises in Newgate [Street, recently erected for Messrs. Wilkinson & Simpson, wholesale chemists of this city, in place of those destroyed by fire on August 22, 1882, have been completed, and business was resumed there with the New Year. The front to Newgate Street is designed in the Queen Anne style, and executed in red Sussex bricks and Prudham stone. The building depends for its effect on the treatment of its proportions, colour, and refinement in detail. Mr. Edward Shewbrooks, F.R.I.B.A., of 2 Market Street, was the architect, under whose superintendence the whole of the work has been carried out.

**Liberal Club, Delph.**—The new Reform Club was opened on December 27. The building is designed in the late Gothic style of architecture, and has a very imposing and somewhat pleasing effect. The front entrance to the club is by a vestibule, which is screened off from the hall by double-hung doors, the upper portion being filled in with embossed glass. On one side of the hall is the billiard-room, amply suited to its purpose, and on the other the committee-room and news-room, both of equal size, all three rooms being laid with wood block paving, which is noiseless, and is not subject to dry rot. At the rear of the premises are the club keeper's apartments, also the heating chamber. The ascent to the assembly-room is by a broad flight of stairs, and on the middle landing is the staircase window, filled in with two coloured margins of a rich blue, affording ample light to the back portion of the club. The assembly hall, the internal dimensions of which are 45 feet by 26 feet 3 inches, is of fine proportions, the roof being ceiled half-way up the spars, thus giving more height to the room. The room is enhanced by two fine stained-glass windows, representing "Peace and Plenty," these being placed in the upper portions of the front centre window. A retiring-room is provided, fitted up with lavatory and other conveniences, and may be entered direct from the main staircase. On the second floor are the clubkeeper's sleeping apartments, these being partly obtained out of the roof. Special attention has been directed to the ventilating and heating of the building. The heating apparatus has been provided and fixed by Mr. R. R. Gibbs, Liverpool. Generally the exterior of the building is faced with Yorkshire parpoints, relieved with tooled stone dressings, the front of the building being enhanced by a well-proportioned balcony, in the soffit of which are carved the initials "P. R. R." for Peace, Retrenchment, and Reform. The erection of the building has been ably carried out by local contractors, the following being the list:—Brickwork and masonry, Mr. C. Winterbottom; carpenters' and joiners' work, Mr. T. Wood, Delph; plastering and painting, Messrs. Whitehead Brothers, Dobcross; plumbing and glazing, Mr. Hudson, Uppermill; slating, Messrs. Shaw Brothers, Delph; wood blocking, Messrs. Andrews & Company, Manchester; lead lights, Mr. Swainebourne, Birmingham. The building has been erected from designs prepared by and under the superintendence of Mr. A. Banks, Rochdale Road, Oldham.

**Wolverhampton.**—The memorial stone of a Hospital for Infectious Diseases has been laid. The building is being erected from the designs of Mr. G. E. Thoms, and will consist of six blocks, upon an area of more than three acres. Four of the buildings are hospital pavilions, and will accommodate forty beds. The estimated cost of the whole is 8,000*l.* The portion now in course of erection is, however, to cost only 3,250*l.* The builder is Mr. Henry Clark.

**Liverpool Zoological Gardens.**—The occasion of the "turning of the first sod" of this undertaking was celebrated by a dinner at the Queen Anne Hotel, Walton, on the 28th ult. Mr. Millward, the Company's manager, and Mr. Kitchen, the secretary, acted as chairman and vice-chairman, and were supported by several shareholders, the contractors, the architects, Messrs. Sugden & Son, Mr. John Shaw, the landscape gardener, and other friends. Mr. Millward gave a brief statement of the very encouraging progress which had been made, of the considerable works actually in hand and those contemplated, and being matured for early execution by the directors and their architects. After Mr. W. L. Sugden had



exhibited and explained the designs for various buildings and their general grouping, Mr. Shaw addressed the company, giving an outline of the general landscape effect he hoped to produce. The customary toasts followed, and brought to a close a practical and business-like, but very enjoyable meeting.

**Clitheroe.**—St. Mary's Parish Church Schools were opened last week by the Mayor. The building is two storeys high, having the principal entrance in Church Street. The lower floor, approached from York Street, contains a schoolroom 46 feet by 44 feet 6 inches; two classrooms, 18 feet 6 inches by 10 feet, and 14 feet by 13 feet 9 inches respectively; a vestibule, cloak-room, lavatories, and closets. Adjoining is a kitchen, fitted with boiler and fire-range for tea-meetings. All these rooms are 17 feet in height. In the basement is a vault for the heating apparatus and fuel store. Above the classrooms, and approached from the vestibule and also from the upper schoolroom, is a room 44 feet 6 inches by 14 feet, for parish and other meetings. The upper floor contains a schoolroom 75 feet by 45 feet, four classrooms, varying in size from 23 feet 6 inches by 18 feet 6 inches, to 15 feet 9 inches by 15 feet, the largest being divided by wood revolving shutters. This floor is entered from Church Street by a wide vestibule paved with tiles, and having cloak-rooms and lavatories on each side. A wide stone staircase connects the upper and lower schoolrooms. At one end of the schoolroom is a large platform. The upper schoolroom has an open timber pitch-pine hammer-beam roof, with crossed principals and perforated spandrels. The external walls are built with Yorkshire parpoints, with Grindleton and Waddington Fell dressings. The gable towards Church Street is surmounted by a lofty bell-tower. The roofs are covered with Welsh slates, in blue and red bands, and the ridge is covered with red ornamental tiles. The windows to the Church Street front are glazed with rolled Cathedral plate-glass in varied tints, and the remainder of the windows with rolled plate-glass. The heating is by means of hot-water pipes and coils on the low-pressure system. Three of the classrooms have open fireplaces, and the ventilation is by means of flues under each window-bottom, and hopper ventilators in the windows. The work has been carried out under the supervision of William S. Varley, F.R.I.B.A., architect, Blackburn.

### SCHOOL BUILDINGS.

**Gosforth.**—New Sunday-schools in connection with the United Methodist Free Church were opened on Christmas Day. The schoolroom is 47 feet long, 28 feet wide, and 20 feet high to the ceiling above the collar-beams; the roof couples are of pitch pine varnished; and the walls are lined with stained and varnished boarding to a height of 4 feet 6 inches from the floor, and finished above with stucco, tinted cream colour, with a moulded wood cornice to the ceiling. The schoolroom is warmed with hot-water pipes, and a coil is placed in the entrance lobby, so that, instead of the usual influx of cold air, there will be a supply of fresh warm air admitted on persons entering or leaving. Two class-rooms, each 16 feet long and 13 feet 6 inches wide, open out of the schoolroom. The whole of the buildings are finished with Kenton stone, and the roofs are covered with blue Welsh slates and ornamental red tile ridges. The work has been carried out by Mr. Matthew Robson, of Gosforth, from the designs and under the personal superintendence of the architect, Mr. Edward Shewbrooks, F.R.I.B.A., of Newcastle-on-Tyne. Messrs. Walker & Emly, of Newcastle, supplied the hot-water fittings.

**Grays Thurrock.**—New Board Schools erected from the designs of Mr. E. C. Allam, F.R.G.S., architect, of Romford, have been opened. The style chosen by the architect was a modified Queen Anne, and the school, which forms an extensive range of buildings, will accommodate 642 children. The centre of the range is occupied by the residences of the principal master and mistress. Mr. William Wood, of Chelmsford, is the builder.

### SANITARY WORKS.

**Drainage of Brentford.**—The new works for the drainage and disposal of the sewage of Brentford have just been completed at a cost of about 30,000*l*. The works have been designed by Messrs. Gotto and Beasley, engineers, of Westminster, and have been carried out by Messrs. Ford and Everitt as contractors for the general works, by the Staveley Coal and Iron Company for the iron pipes, and by Messrs. James Watt and Co. for the engines and machinery. The sewage is pumped from a collecting well in the town meadow to the sewage tanks on the Ealing road, a distance of more than a mile, and it is deodorised and precipitated by the mixture of lime and sulphate of alumina, the effluent water being discharged into the river by an effluent culvert along the line of Claypond's Lane. The sludge is dried by means of flues constructed under the tanks, and is run out by a small tramway.

**Evesham Waterworks.**—The works for supplying the borough of Evesham with water from the Broadway Hill, one of the Cotswold range, about seven miles distant, were opened on Tuesday,

and the event was celebrated with general rejoicing. The scheme of the undertaking was prepared by Mr. W. M. Landsborough, engineer to the Cheltenham Corporation, and it has been executed on the original lines and within the estimated cost, which necessitated a loan of nearly 12,000*l*. Messrs. Firmstone Brothers, of Stourbridge, Evans Brothers, of Wolverhampton, J. E. White, of Evesham, and Guest and Chrimes, of Rotherham, are the contractors who have been concerned in the work.

### GENERAL.

**The Huddersfield Fine Art Exhibition**, which was closed on Saturday, was visited during the time it was open by 329,190 persons. Financially the Exhibition has been a failure, the expenses having amounted to the large sum of 13,000*l*.

**Mr. A. Banks** of Oldham has obtained the first and third prize in the competition for plans for the proposed local Workhouse Schools. The second prize was awarded to a design by Mr. Wolstencroft of Royton. There were thirty seven competitors.

**The First Town** to be entirely lighted and have its tramcars driven by electricity will be Montreux, on the Lake of Geneva, a company having obtained a concession for the purpose. The motive power is derived from the water of the lake. Extensive works are to be erected immediately.

**A Carved Oak Pulpit** has been executed for Old Radford Church, near Nottingham, by Messrs. Jones and Willis. The same firm have supplied a stone and marble reredos to St. Andrew's Church, Netherton, from designs by Mr. Drinkwater.

**The Dorset County Museum** at Dorchester was opened on Tuesday by the Earl of Shaftesbury. His lordship spoke with some indignation of a proposal to remove Crosby Hall, London, and said that one effect of museums was to inspire greater reverence for the past. The building has cost about 7,000*l*. and the site was presented by Mr. R. Williams.

**The Paving and Flagging Works** carried out in the streets of Manchester during the past eighteen months amount to 394,000 square yards, or a total of 81 acres. The cost of the work has been 170,000*l*.

**The Church Extension Committee** of the Edinburgh Presbytery report that out of seven new churches projected in 1877, four have now been built.

**The Gas Committee** of the Manchester Corporation, in addition to the money already borrowed for the extension and improvement of the gas works, require a further sum of 200,000*l*., and it is intended that the section of the Act relating to borrowing powers should be amended by means of a provisional order so as to enable the amount to be raised.

**Messrs. Wailles & Strang** of Newcastle-on-Tyne have lately filled the east window of the parish church of St. Mary's, Rye, with stained glass, that has given great satisfaction to the vicar and parishioners. The cost has been about 550*l*.

**The Vicar of Horsforth**, near Leeds, has received, anonymously, a donation of 500*l*. for the parish church building fund.

**The India Office** has had estimates prepared for the fortification of Aden. The estimated cost is 100,000*l*.

**M. Edmond About**, who has lately visited Constantinople, says that the mosaics of St. Sophia are fast perishing. Cubes constantly fall or are picked out of the walls and sold to strangers.

**The Town of Wallingford, Berks**, has now obtained an abundant supply of water. Messrs. Le Grand and Sutcliffe have sunk one of their Artesian Tube Wells, 53 feet deep, 7 inches diameter, into the upper greensand formation, from which upwards of 100,000 gallons per day can readily be drawn. The operation of sinking this tube well occupied less than three weeks, and the supply can at any time be doubled by sinking a duplicate tube well. The engineer is Mr. W. A. Ripley, of Bracknell.

**Messrs. Stanley, Hall & Co.** have secured the contract for the whole of the constructional ironwork for the new Artisans' Dwellings now being erected by the City Commissioners of Sewers, Petticoat Square, amounting to 6,050*l*.

**The Silicated Carbon Filter Co.** have introduced a new filter which has the advantage of a movable block that can be cleaned, renewed, or repaired by the possessor; and on its removal the filter can be thoroughly cleansed. The new patent arrangement obviates the inconvenience attending the use of filters.

**Messrs. Measures Bros.** have issued a calendar for office use which contains tables of the sizes, weights and strengths of girders. In the centre is a sketch of the building in Cheapside after the fire in which Messrs. Measures' iron work alone remained uninjured.

**Mr. Alexander B. Sim** has become a partner in the firm of Messrs. Churchill & Sim, Clement's Lane, E.C.

**The Sanitary Paint Company**, Liverpool, are about to enlarge their manufacturing premises, to enable them to keep pace with the increase in their export trade.

**The Pulsometer Company** have just issued a new illustrated catalogue of their pumping machinery, which is now in daily use in this country and in the colonies.









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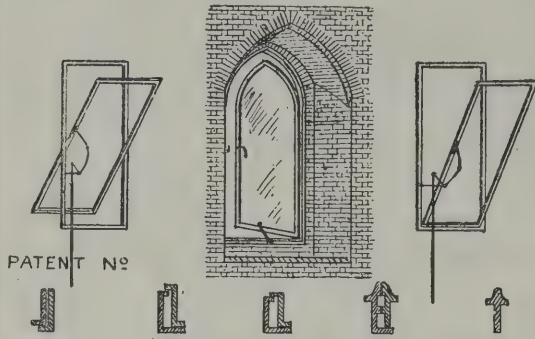
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Is an apparatus by means of which Top lights of Windows Skylights, Lantern lights &c can be easily opened or closed and securely fastened. The Lever or Handle and a small iron rod being adjusted in such a manner as to form a counter balance to the rising or falling sash gives an easy action unobtainable by any other means.

May be applied to Wood or Metal Sashes.



Weather proof Metal Sashes may be had in connection with the Sash Lever or otherwise.

Thomas Elsley sole manufacturer:  
Portland Metal Works  
32 Great Portland St.  
LONDON. W.

MAY BE APPLIED WITH ADVANTAGE IN SCHOOLS, HOSPITALS, PUBLIC OFFICES, ASYLUMS, FACTORIES  
AND OTHER BUILDINGS WHERE GOOD VENTILATION IS REQUIRED,

And as several Sashes may be opened with one action of the Lever or Handle and fixed in any desired position, the Supply of Air can be regulated with little trouble.

This Apparatus is used in place of Cords and Pulleys for Opening Windows. For all ordinary Top Lights over Sliding Sashes, School Windows, Skylights, Dormers, Lantern Lights, Greenhouses, &c., it may be applied with safety. The action of the Lever is so arranged that the weight of the Sash is made to balance against the Rod and Handle; this Balance enables the operator to open or close the Sash by an easy motion without danger to the Glass, the Sash being fixed in any position by means of a simple contrivance in the Handle. Thousands of sets of these Actions have been fixed, and in no case has a failure occurred, or a Broken Window given cause of complaint.

It supplies a Simple, Inexpensive, and Efficient Method of Ventilation for Schools, Offices, Hospitals, Workhouses, Asylums, Billiard Rooms, Conservatories, Stables, and all Buildings where good Ventilation is required.

The following is a List of some of the Buildings where this Apparatus may be seen in action:—

### SCHOOLS.

Anglo-German, Brixton  
Bromley Hall  
Claron Street  
Duncombe Road  
Albion Road, Hammer-smith  
High School for Girls, Dulwich  
High School for Girls, Norland Square  
High School for Girls, Chenies Street  
North End, Fulham  
Pope Street, Eltham  
Plaistow  
London  
Cator Street, Peckham  
Silvertown  
West Ham  
Warpole Way, Wandsworth  
Brighton Board Schools  
King Edward's School, Oxford  
University College, Gower Street

High Street, Blackheath  
Ipswich  
Ashford  
Hornsey  
Sheffield  
Croydon  
New Divinity, Cambridge  
School of Art, Titchfield Street  
Royal Naval Schools, Greenwich  
High-class School, Blackheath  
New Training College, Tottenham  
Merchant Taylors' School, Liverpool  
New Schools, Leyton  
New Church Schools, Canning Town  
New Grocers' Schools, Hackney Downs  
Church Schools, Baker St.  
British and Foreign, Boro' Road  
Catholic, Dartford

### VARIOUS.

Messrs. Unwins, Ludgate Hill  
H.M. Dockyard, Chatham  
Park Hill Ho., Streatham  
Corn Market, Mark Lane  
Liverpool Exchange  
New Natural History Museum, Kensington  
District Gas Company's Offices  
Messrs. Peak, Freaan & Company's Offices  
Bagshot Park  
Boys' Home, Stepney  
Mansion, Chislehurst  
Stables, Oxford  
Messrs. Anderson, Anderson & Co., Billiter Avenue, E.C.  
Messrs. Lazenby & Sons  
Board of Works Offices, Greenwich  
Dispensary, Stratford  
Gasworks, Haggerstone  
Mansion, Buckingham Gt

Stores, Haymarket  
Lord Derby's Stables, London  
Mansion House Chambers, Size Lane, E.C.  
Girls' Refuge, Cambridge Heath  
The Mount, Wadhurst  
Mr. Peter Jones' Warehouses, King's Road, Chelsea

### TAVERNS.

King's Head, Clapham  
Hercules, Kennington  
Prince Regent, Sidmouth Street, W.C.  
Craven Arms, Salop (Billiard-room)  
Spread Eagle, Wndswrth  
Great Eastern Railway Hotel, Liverpool Street  
Charing Cross Hotel

### CHURCHES, &c.

St. Peter's, Hornsey  
Ryde

Dover (New Church)  
New Wesleyan Chapel, Kentish Town  
New Wesleyan Chapel, Waltham Abbey  
Mission Room, Ratcliff  
Mission Hall, High St., Shadwell  
Free Christian Church, Clarence Road

### ASYLUMS.

Coulsdon  
Wandsworth  
Moultsford  
Sussex County

### HALLS.

Reading Town Hall  
County Hall, Derby  
Kensington Town Hall  
Scottish Corporation  
New Hall, Clapton

### CLUBS.

Lotus, Regent Street  
Reform, Pall Mall

Brighton, New Club  
Marlboro' Rooms, Regent Street  
Hanover Square Club  
Pall Mall

### HOSPITALS.

Brompton  
Brighton  
Charing Cross  
Fever (London)  
Putney (Royal)  
National, Queen Square  
Temperance  
Ophthalmic  
Twining, Twickenham  
Children's, Hackney  
District Infirmary, Nottingham Hill

### WORKHOUSES.

Marylebone  
Homerton  
Oxford  
Mile End  
Edmonton  
Islington

\* The weight of an iron rod is made to balance against the weight of a Sash falling to the Room, thereby enabling the Sash to be opened with an easy motion.

**THOMAS ELSLEY, METAL WORKER, 32 GT. PORTLAND ST., W.**



**APPOINTMENT VACANT**

**CHELMSFORD.**—Jan. 25.—Applications are required by the Chelmsford Rural Sanitary Authority for the Appointment of a District Surveyor. Salary 250*l.* per annum. Applications are also required for the Appointment of an Assistant Surveyor for the District. Salary 200*l.* per annum. Mr. W. W. Duffield, Clerk to the Rural Sanitary Authority, 96 High Street, Chelmsford.

**HACKNEY.**—Jan. 7.—Applications are required for the Appointment of a Road Surveyor. Mr. James Lovegrove, Chief Surveyor to the Hackney District Board of Works, Town Hall, Hackney.

**WORKSOP.**—Jan. 5.—Applications are invited by the Worksop Local Board for the Appointment of a Surveyor at a salary not to exceed 150*l.* per annum. Mr. John Appleton, Clerk to the Local Board, 64 Bridge Street, Worksop.

**COMPETITIONS OPEN.**

**ABERDEEN.**—July 1, 1884.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10*s.* 6*d.* to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

**BLOEMFONTEIN.**—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

**CAPE TOWN.**—Jan. 30.—The Town Council of the City of Cape Town invite Plans and Specifications, accompanied with approximate estimate of cost, of a System of Drainage. Selected Plans and Specifications to become the absolute property of the Corporation. All others will be returned free of expense. Premium of 250*l.* A plan of the City, with levels, may be seen, and further information

may be obtained, on application to the South African Loan, Mortgage, and Mercantile Agency, 9 King William Street, London, E.C.

**HOWDEN.**—Jan. 5.—For System of Sewerage and Sewage Disposal. Mr. Henry Green, Assistant Clerk to the Rural Sanitary Authority, Howden.

**LONDON.**—March 1, 1884.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

**ST. PANCRAS.**—Feb. 1.—Designs are invited for Buildings for Mortuary and Coroner's Court. Mr. T. Eccleston Gibb, Vestry Clerk, Vestry Hall, St. Pancras Road, N.W.

**UXBRIDGE.**—Jan. 31.—For System of Sewerage and Sewage Disposal. Mr. Charles Woodbridge, Clerk to the Rural Sanitary Authority, Uxbridge.

**WALMER.**—Jan. 21.—Designs are invited for Laying Out the Estate of St. Clare for Building Purposes. Messrs. W. & T. Denny, Walmer.

**WOLVERHAMPTON.**—Plans are required for the Erection of Volunteer Headquarters and Drill-hall. Major W. Blake Burke, Adjutant, Wolverhampton.

**CONTRACTS OPEN.**

**ABERDEEN.**—Jan. 8.—For Steam Boiler and Curing Plant, to be Erected at Torry. Mr. Alexander Dalgety, Engineer, Hutcheon Street, Aberdeen.

**ARDEE.**—Jan. 15.—For Sinking of Open Drains or Water Courses on the north and south sides of the River Dee, and the Construction of Tanks and Sewers, with Auxiliary Works. Mr. Thomas B. Dromgoole, Sanitary Officer, Board Room, Ardee Workhouse, Ireland.

**AVIEMORE.**—Jan. 24.—For Construction of Bridge over the River Sprey; Masonry, &c., in Abutments and Pier, Wrought-ironwork Superstructure, and Cast-iron Cylinders in Pier, &c. Mr. W. Roberts, Engineer, Surveyor's Office, Kingurrie.

**BALLATER.**—Jan. 17.—For Construction of Stone Bridge over the River Dee, with Cast-iron Cylinders, Foundations, Approach Roads, and Works in connection. Messrs. Jenkins & Marr, C.E., 16 Bridge Street, Aberdeen.

**BECKENHAM.**—Jan. 14.—For Works of Paving, Kerbing, and Footpaths Improvement, comprising about 22,000 feet of Pennant stone and granite kerb, 4,000 feet of granite channelling, and 2,000 square yards of 2-inch red brick paving, the Relaying of about 8,000 feet of Purbeck

kerb, and other works in connection therewith. Mr. Geo. B. Carlton, C.E., Surveyor to the Local Board, Beckenham, Kent.

**BELFAST.**—For Building a Pair of Semi-detached Villas in Marlborough Park. Mr. William Batt, jun., Garfield Chambers, Garfield Street, Royal Avenue, Belfast.

**BERWICK-ON-TWEED.**—Jan. 22.—For Single-lift Gas-holder for Works at Spittal, for the Berwick and Tweed-mouth Gaslight Company. Mr. Paterson, C.E., Warrington.

**BERWICK-ON-TWEED.**—Jan. 22.—For Construction of a Cast-iron Gasholder Tank, at the Works, Spittal. Mr. Paterson, C.E., Warrington.

**BLACKBURN.**—Jan. 12.—For Wrought-iron Girders and Castings for Bridge over Blakewater. Mr. J. Braddon McCallum, Borough Engineer, Municipal Offices, Blackburn.

**BLACKBURN.**—Jan. 12.—For the Supply of Granite, Limestone, Stone for Under-bedding, Lime and Cement, Setts, Sidestones, Circular Kerbs and Flags, Iron Castings, Bricks, Timber, Wallstone, &c. Mr. J. B. McCallum, Borough Offices, Municipal Offices.

**BLACKPOOL.**—Jan. 9.—For Supplying 2,000 tons of 6-in. by 4-in. Granite Setts. Mr. T. Sunderland, Borough Surveyor, Town Hall, Blackpool.

**BLOXWICH.**—Jan. 9.—For Alterations to Leamore Schools' Mr. S. Loxton, Architect, Park Street, Walsall.

**BOLTON.**—Jan. 19.—For Construction of Outfall Sewage Works at the Hacken. The Borough Surveyor, Town Hall, Bolton.

**BRIGHTON.**—Jan. 9.—For the Supply of 5,000 feet lineal of 12-in. by 6-in. flat Granite Kerb, 5,000 feet of 10-inch by 6-in. Granite Edge Kerb, and 300 tons of 6-in. by 4-in. Granite Pitchers, at Shoreham Harbour or at one of the Brighton Railway Stations. Mr. P. C. Lockwood, C.E., Borough Surveyor, Town Hall, Brighton.

**BURMANTOFTS.**—Jan. 7.—For the whole of Portion of Works in the Erection of Schools, Outbuildings, and Boundary Walls, Nippet Lane, for the Leeds School Board. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

**CALVERLEY.**—Jan. 15.—For the various Works in connection with the Rebuilding of Hollypark Mills, Calverley, near Leeds. Mr. Jowett Kendall, Architect, Idle.

**CLEETHORPES.**—For the Erection of a Wesleyan Chapel and Schools. Mr. C. Bell, F.R.I.B.A., Architect, Dashwood House, 9 New Broad Street, E.C.

**CRICKLEWOOD.**—Jan. 18.—For Making-up, Kerbing, Channelling, Metalling, and Tar-paving Claremont Road.

# IMPORTANT REDUCTION IN PRICES

## BOYLE'S PATENT

### SELF-ACTING

## AIR-PUMP VENTILATORS

### ARE NOW

### REDUCED IN PRICE FORTY PER CENT.

Less than they were three years ago, making them now not only the MOST EFFICIENT, but the CHEAPEST VENTILATORS IN THE MARKET.

FROM **15/-** AND UPWARDS.

APPLY FOR REDUCED PRICE LIST TO

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64 HOLBORN VIADUCT, LONDON, and 110 BOTHWELL ST., GLASGOW.



Mr. J. Pollard, Surveyor to the Hendon Local Board, Breat Street, Hendon.

DERBY.—Jan. 7.—For the Erection of a Girls' School on the Ashbourne Road. Mr. F. C. Coulthurst, Architect, Albert Street, Derby.

DITTISHAM.—Jan. 8.—For the Erection of a Small House at Dittisham, on the Dart. Mr. E. Appleton, Architect, 1 Vaughan Parade, Torquay.

DYMOCK.—Jan. 14.—For Alterations and Additions to Dymock Schools. Messrs. Waller Son, & Wood, Architects, 17 College Green, Gloucester.

EAST DEAN.—Jan. 17.—For the Construction of an Impounding Reservoir at Greenbottom, in the township of East Dean. Plan and Specification at the Office of the Surveyor, Cinderford.

EAST WALKER.—Jan. 14.—For Building an Infants' School, and for Alterations and Additions to Board Schools. Mr. John Johnstone, Architect, 6 Clayton Street West, Newcastle-on-Tyne.

EDMONTON.—Jan. 15.—For Laying Rainwater Drains, Building Small Pump-house, Fixing Pump and Tank, &c. Mr. T. E. Knightley, Architect, 106 Cannon Street, E.C.

ELGIN.—For Various Works in the Erection of Two Cottages at Elgin. Messrs. A. & W. Reid, Architects, Elgin.

ELTHAM.—Jan. 10.—For Construction of Brick Sewer (14,000 feet). Sir J. W. Bazalgette, C.E., Metropolitan Board of Works, Spring Gardens, S.W.

EYEMOUTH.—Jan. 7.—For Building Mortuary, Forming Cemetery, &c. Mr. J. Donaldson, Eyemouth.

EYEMOUTH.—Jan. 8.—For Improvement Works to Harbour. Messrs. Thomas Meik & Sons, C.E., 6 York Place, Edinburgh.

FINCHLEY.—Jan. 14.—For Paving, Metalling, Kerbing, Sewering, and Making-up of Brownlow Road and Grunelsen Road. Mr. G. W. Brumell, Surveyor to the Local Board, Local Board Offices, Church End, Finchley, N.

GRAVESEND.—Jan. 7.—For Building Caretaker's House in Church Street, for the Gravesend United District School Board. Mr. George C. Hammond, Clerk to the School Board, 27 King Street, Gravesend.

GREAT YARMOUTH.—Jan. 11.—Sewers—For Laying 10,000 feet run of glazed pipe sewers, from 18-inches to 9 inches in diameter, with manholes and flushing and ventilating openings, with other works. Mr. J. W. Cockrill, Borough Surveyor, Municipal Buildings, Great Yarmouth.

HEBBURN.—Jan. 7.—For Forming, &c., Private Streets and Paving Others. Mr. Fred. West, Surveyor to the Local Board.

HUDDERSFIELD.—Jan. 10.—For the Various Works required in the Erection of Six Dwelling-houses, Boundary Walls, and Out-offices, Upper Brow Road, Paddock. Messrs. John Kirk & Sons, Architects, Huddersfield.

HULL.—Jan. 17.—For Formation of Adit or Tunnel (one mile) from Springhead Pumping Station. Mr. D. Maxwell, Engineer, Town Hall, Hull.

JARROW ON-TYNE.—Jan. 10.—For Building Methodist New Connection Church. Mr. William Hill, F.R.I.B.A., Architect, 11 Park Square, Leeds.

KERWORTH.—For Alterations and Additions to House. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

KILMAINHAM.—Jan. 7.—For the Construction of 500 lineal feet of stoneware socketed pipes, 12 inches diameter, with manhole, junctions, ventilators, and other works necessary, for the Commissioners of the Township of New Kilmainham. Mr. W. J. Hamilton, Secretary and Executive Sanitary Officer, Commissioners' Office, Court House, Kilmainham.

KINROSS.—Jan. 17.—For Construction of Works for Supplying the Burgh with Water. Mr. W. R. Copland, C.E., 146 West Regent Street, Glasgow.

LANCASTER.—Jan. 7.—For Paving, &c., in Primrose Street. The Borough Surveyor, Lancaster.

LANCASTER.—Jan. 14.—For Building Residence for Mr. A. W. Hunt. Messrs. Paley & Austin, Architects, Lancaster. Mr. W. Wright, Surveyor, Lancaster.

LEEDS.—Jan. 9.—For the Joiner's, Slater's, Ironfounder's and Glazier's Work required in the Erection of a New Saw Mill Shed. Mr. Thomas Winn, Architect, Victoria Buildings, 18 Park Row, Leeds.

LIGHTCLIFFE.—Jan. 12.—For Building a Villa. Mr. Charles F. L. Horsfall, Architect, Lord Street Chambers, King Cross Street, Halifax.

LLANDAFF.—Jan. 9.—For Widening and Improving Portion of Llystalybont Road. Mr. William Price, District Surveyor, 14 Westbourne Place, Cardiff.

LLANSAMLET.—Jan. 7.—For Building School at Penrl Green. Mr. Rees Llewellyn, Architect, Llanhamlet.

MIDDLESBROUGH.—Jan. 19.—For Construction of Hury Reservoir (Contract No. 3). Mr. Mansergh, C.E., Engineer, 3 Westminster Chambers, Victoria Street.

MIDLAND RAILWAY.—Jan. 17.—For the Erection of an Ironfoundry at Derby and a Goods Shed at Glascote, near Tamworth. Drawings, Specification, and Quantities at the Engineer's Offices, Midland Station, Derby.

MORLEY.—Jan. 14.—For Making Roads, Planting, and Laying Out Morley Cemetery. Mr. Edwin Butler, Clerk to the Burial Board, Victoria Road, Morley.

NEWBURN-ON-TYNE.—Jan. 8.—For Building a Working Men's Club. Messrs. Lamb & Armstrong, Architects, 38 Grainger Street West, Newcastle-on-Tyne.

NOTTINGHAM.—For Building Offices in London Road. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

POOLE.—Jan. 9.—For Completion of Vagrants' Ward and Other Works at the Union. Mr. H. B. Barnes, Architect, Poole.

PRESTON.—For Extension of Science Schools, Harris Institute. Mr. James Hibbert, Architect, 143 Church Street, Avenham Street, Preston.

RAWMARSH.—Jan. 15.—For Laying Gas Main and Service Pipes (407 yards). Mr. J. W. Bellamy, Clerk to the Local Board, Rewmarsh.

READING.—Jan. 22.—For Works required in Alterations of the present Buildings of the Reading and Earley combined Board School, and in the Erection of Additional Buildings for the Infants' Department. Messrs. Morris and Stallwood, Architects, Friar Street, Reading.

REDDISH.—Jan. 9.—For Construction of Sewage Purification Tanks and other Works in connection therewith. Mr. Edward Sykes, the Union Offices, Shaw Heath, Stockport.

RHAYADER.—Jan. 14.—For the Erection of Stabling and Studio at Glaslyn, near Rhayader, for Mr. H. W. B. Davis, R.A. Mr. S. W. Williams, County Surveyor, Rhayader.

SANDIACRE.—For Building Villa. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

SCOTTHOLME.—For Building Wesleyan Chapel. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

ST. PANCRAS.—Jan. 24.—For the Erection of Additional Workhouse Buildings for 500 inmates, on Cook's Terrace Site, adjoining the Workhouse, St. Pancras Road. Mr. H. H. Bridgman, Architect, 42 Poultry, E.C.

SNYDALE.—Jan. 5.—For Erection of Board Schools for Boys, Girls, and Infants, with Master's House, Offices, Boundary Walls, &c. Mr. W. Shackleton, Architect, Market Place, Pontefract.

STRETFORD.—Jan. 5.—For Forming and Draining Cemetery and Approach Road. Mr. H. Royle, Surveyor, 5 Windsor Terrace, Old Trafford.

SWANSEA.—Jan. 23.—For Erection of New Blocks and Extensions and Alterations to the present Swansea Union Workhouse. Messrs. Blesley & Aspinall, Architects, Cardiff.

TAURO.—Jan. 14.—For Additions to Wesleyan Methodist School Premises. Mr. John Trounson, Architect, 51 Chapel Street, Penzance.

# ZINC ROOFING,

## CORRUGATED IRON ROOFING

(FIXED COMPLETE).

# GALVANISED IRON

## OPEN CISTERNS & CLOSE TANKS

KEPT IN STOCK, ALSO MADE TO ORDER IN ANY SIZE.

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THE OLDEST FIRM IN THE TRADE,  
**TREGGON & CO.,**  
YORK WORKS, BREWERY ROAD, LONDON, N.,  
And 19 JEWIN STREET, E.C.



VENTNOR.—Jan. 7.—For Building Bank Premises for the Capital and Counties Bank. Mr. Theodore R. Saunders, Architect, Church Street, Ventnor, Isle of Wight.

WANDSWORTH.—Jan. 8.—For Making-up Thornsett Road. Mr. Arthur Alex. Corsellis, Clerk to the Wandsworth District Board of Works, Battersea Rise, S.W.

WEST WALKER.—Jan. 14.—For Extensive Additions and Alterations to the Board Schools. Mr. John Johnstone, Architect, 6 Clayton Street West, Newcastle-on-Tyne.

WOODHOUSE.—Jan. 7.—For the Erection of Schools, Outbuildings, and Boundary Walls, Quarry Mount, for the Leeds School Board. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

## TENDERS.

### ACCRINGTON.

For Street Improvement Works, Accrington. Mr. ELI KNOWLES, Surveyor.

HUNTER (accepted)—Schedule.

### AUDENSHAW.

For Alterations and Extensions of two Houses in Guide Lane, Audenshaw, and for Conversion of same into Stores, Offices, and Board-room. Mr. J. H. BURTON, Architect, Ashton-under-Lyne.

Clayton, Denton	£403	0	0
Sampson, Dukinfield	373	0	0
Pike, Hooley Hill	372	10	0
Haughton, Godley	366	0	0
Williamson, Ashton-under-Lyne	354	0	0
Marsden, Ashton-under-Lyne	330	0	0
Gibson, Dukinfield (accepted)	325	0	0
Smith, Droylsden	325	0	0
Grayson, Bradford	320	0	0
Sharrat, Droylsden	319	0	0
Gibbons, Manchester	289	15	0

### BALLYCOTTON.

For Construction of Tank, Fountains, &c., for the Guardians, Ballycotton, Cork.

Coffee	£74	16	6
Hichet	70	0	0
M'CARTHY (accepted)	66	10	6
Murphy	65	0	0
Manning	57	17	0

### BASINGSTOKE.

For Erecting Fence round the River Loddon, Basingstoke. Mr. H. BUDDEN, Surveyor.

Pike Bros.	£28	6	0
Kent & Tunn	28	5	0
Goodhall	26	11	6
Blunden	23	15	0

### BARKING.

For Street Works, Barking, Essex. Mr. DAWSON, Surveyor.

Glemmy	£845	9	0
Hawkins	767	0	0
Surveyor's estimate	476	0	0

#### Tar Paving.

HOEMAN (accepted)	212	16	0
Surveyor's estimate	213	0	0

### BIRMINGHAM.

For Supplying and Fixing Speaking Tube and Electrical Bell Communication at the New Parish Office, Birmingham. Mr. W. H. WARD, Architect.

Radcliffe	£410	0	0
Vulcan Manufacturing Co.	355	0	0
Smith & Sons	350	0	0
Morand	276	12	0
Sadler	210	0	0
HILL (accepted)	189	8	0
Shepherd	70	0	0

For Supplying and Fixing No. 7 Iron Doors at the New Parish Offices, Birmingham. Mr. W. H. WARD, Architect.

Tann & Co.	£185	0	0
Whitfield & Co.	147	0	0
Smith	147	0	0
Hipkins	135	0	0
Wood & Co.	127	15	0
Taunton	122	10	0
Clark, Bunnett & Co.	120	0	0
Talbot	119	0	0
Cotterill & Co.	115	10	0
White	115	10	0
Lucas & Co.	115	10	0
PRICE (accepted)	105	0	0
Withers & Co.	101	10	0

For Supplying and Fixing a Lift at the New Parish Offices, Birmingham. Mr. W. H. WARD, Architect.

Barnes & Co.	£124	0	0
Hassall & Singleton	120	0	0
Causar & Co.	110	10	0
Hodkinson & Clarke	81	0	0
Waygood & Co.	78	5	0
Thomas & Sons	56	10	0
CLARK, BUNNETT & Co. (accepted)	45	0	0

For Building Salvation Army Offices, &c., Birmingham. Mr. SHERWOOD, Architect.

Whittall	£1,198	0	0
Webb	1,144	0	0
Bissett & Son	1,090	0	0
Smith	1,076	0	0

### CARDIFF.

For Water Supply Pipes and Mains, for the Cardiff Town Council.

SPITTLE & Co. (accepted).

### CAMBRIDGE.

For Rebuilding Bentinck Arms, Castle Street, Cambridge. Mr. FRANK WATERS, Architect. Quantities supplied.

Rye	£723	19	6
Saint	654	0	0
CHRISTMAS (accepted)	644	0	0

### CHARD.

For Road Improvement Works, Chard.

HILL (accepted)	£26	0
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### CRAMLINGTON.

For Forming Road in Front of the Cramlington Co-operative Society's Stores.

DIXON & GARDNER, West Cramlington (accepted)	£45	0	0
Cumming, Newcastle-on-Tyne	45	0	0
Hall & Co., Newcastle-on-Tyne	44	11	0
Curry & Co., Newcastle-on-Tyne	39	3	3
Simpson, Newcastle-on-Tyne	35	0	0

### CULLOMPTON.

For Construction of Sewers, Cullompton. Mr. H. T. BOLT, C.E., Engineer.

Stone	£286	18	0
Reynolds	230	0	0
Parkhouse	170	0	0
Manning	169	18	0
Tucker & Sons	163	16	0
Inclined	152	7	0
Durke	145	0	0
Denning	130	10	0

### DEEPIST. JAMES.

For Rose and Crown Inn, Deeping St. James, Lincolnshire. Mr. J. B. CORBY, Architect, Stamford.

Hilliam, Stamford	£548	0	0
Sharp, Bytham	524	0	0
Story, Bowin	480	0	0
Ludlow & Emerson, Stamford	474	0	0
Stimson, Market Deeping	464	0	0
HINSON, jun., Bowin (accepted)	440	0	0

### DOVER.

For Erection of a Mortuary at the Workhouse Hospital.

PARKE (accepted)	£38	0	0
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### EXETER.

For Additions to the Devon and Exeter Hospital for Out Patients, Exeter. Mr. R. MEDLEY FULFORD, A.R.I.B.A., Architect, The Close, Exeter. Quantities supplied.

Sharland	£1,145	0	0
Warden & Yardley	1,129	0	0
Gibson	1,116	0	0
SCADDING (accepted)	1,065	10	0
Pratt	1,061	0	0
Gooding	1,047	17	0
Moas & Son	1,000	0	0

# FIFTH ANNUAL BUILDING TRADES EXHIBITION,

AGRICULTURAL HALL, LONDON,

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PLANS & FULL PARTICULARS

MAY NOW BE OBTAINED

UPON APPLICATION TO

PHILIP SHRAPNEL, WALBROOK HOUSE, WALBROOK, LONDON, E.C.



## EXETER.

For Dwelling-house, Prospect Park, Exeter, for Mr. Hy. Ellis. Messrs. PACKHAM & CROOTE, Architects. Quantities not supplied.

Sutton	£680 14 8
Reynolds	564 18 0
Hicks	490 0 0
Sanford	461 10 0

## FERNDALE.

For a new House at Ferndale, Glamorganshire, for Mr. William Ellis, "Ynyswen." Messrs. DAVIS & PHILLIPS, Architects, Pontypridd.

BROWN, Ferndale (accepted)	£166 11 9
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Walling Stone on the Site.

## GLOUCESTER.

For Works to Heathville Road, Gloucester. Mr. R. READ, City Surveyor.

RIDD (accepted)	£164 0 0
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Lowest tender received.

## GREENOCK.

For the Works of the Third and Remaining Section of the New Municipal Buildings, Greenock. Mr. A. J. TURNBULL, Burgh Engineer.

## Lowest Tenders.

Galbraith, Glasgow, mason	£14,500 0 0
Miller & Brown, Greenock, joiner	5,208 0 0
M'Credie, Greenock, plaster	1,211 0 0
Young, Glasgow, carving	1,045 0 0
Meklie & Son, Glasgow, glazier	845 0 0
M'Lean & Co., Greenock, plumber	837 0 0
Crawford & Thomson, Greenock, cast-iron	768 0 0
Phillips & Son, Greenock, slater	165 0 0
Fosh, Glasgow, gasfitter	135 0 0

Total . . . £24,912 0 0

## HARTLEPOOL.

For Building Upper Grade Schools, for the Stranton School Board, at West Hartlepool. Mr. J. GARRY, Architect. Quantities by Mr. W. Hodgson.

Cockburn	£4,452 7 0
Harrison	4,440 7 0
Atkinson	4,382 4 6
Sanderson	4,320 0 0
Robson	4,298 7 11
Curzon	3,995 0 0
Johnson	3,960 0 0
Beetham	3,859 0 0
HOWE (accepted)	3,820 0 0

## HOVE.

For the Construction of the Sea Wall Inclines and Timber Groynes, at Hove, Sussex.

HILL & Co. (accepted)	£23,946 0 0
-----------------------	-------------

## HEPWORTH.

For proposed School at Hepworth, Huddersfield. Mr. T. WOOD, Architect.

## Accepted Tenders.

England & Son, Holmfirth, mason.  
Brown & Shaw, Holmfirth, joiner.  
Durrans, Moldgreen, plumber.  
Pycock & Sons, Leeds, slater.  
Jackson, Holmfirth, plasterer.  
Quarmby, Holmfirth, painter.  
Total cost, £1,000.

## LEWISHAM.

For Public Swimming and other Baths at Ladywell, for the Commissioners of Baths and Washhouses for the Parish of Lewisham. Messrs. WILSON, SON & ALDWINCKLE, Architects, 2 East India Avenue, Leadenhall Street, E.C. Quantities supplied.

Priestly	£9,800 0 0
Martin	9,380 0 0
J. & C. Bowyer	9,215 0 0
Stafford	9,142 0 0
Marshall	9,086 0 0
Joselyne	9,081 0 0
Redman	9,043 0 0
Shurmer	8,900 0 0
J. Mowlem & Co.	8,883 0 0
Nightingale	8,868 0 0
Howell	8,650 0 0
Olley	8,411 0 0
Jerrard	8,400 0 0
Holloway	8,276 0 0
Foster & Dicksee	8,174 0 0
Hobbs	8,060 0 0
D. D. & A. Browne	8,025 0 0

For Public Swimming and other Baths at Forest Hill, for the Commissioners of Baths and Washhouses for the Parish of Lewisham. Messrs. WILSON, SON & ALDWINCKLE, Architects, 2 East India Avenue, Leadenhall Street, E.C. Quantities supplied.

Priestly	£9,100 0 0
J. & C. Bowyer	8,935 0 0
Joselyne	8,611 0 0
Stafford	8,486 0 0
Hall, Beddall & Co.	8,437 0 0
Marshall	8,336 0 0
Mowlem & Co.	8,270 0 0
Nightingale	8,223 0 0
Shurmer	8,090 0 0
Jerrard	8,033 0 0
Howell	8,031 0 0
Redman	7,894 0 0
Holloway	7,847 0 0
Olley	7,799 0 0
Hobbs	7,640 0 0
Jones	7,575 0 0
Foster & Dicksee	7,575 0 0
D. D. & A. Browne	7,177 0 0
Martin	7,018 0 0

## HASTINGS.

For Alterations to the Royal Oak Hotel, Hastings.

Read, Streatham	£855 10 0
Howell & Sons, Hastings	720 0 0
WALKER, Limehouse (accepted)	688 0 0

## LISBON.

For 16,000 tons of Steel Rails, on account of the Portuguese Government, for the South and South-Eastern Railways of Portugal.

## Lowest Tenders.

Rhenish Steel Works	per ton.
Cockerill Company	£5 8 0
Bochum Mining and Cast-Steel Manufacturing Association	5 4 0
	4 19 3

## LONDON.

For Building Club-room, exclusive of Fittings, at the Refiners' Arms, Buross Street, Commercial Road, E.

MOYLE & SON (accepted)	£212 0 0
------------------------	----------

For Alterations to House in King's Road, Chelsea.

King	£232 10 0
Hudson	195 0 0
Holliday & Greenwood	188 0 0
Adamson & Sons	180 0 0

For Rebuilding House, 210 Mile End Road.

F. & F. J. Wood	£635 0 0
Lusk	600 0 0
Poole & Co.	555 0 0
Russell	550 0 0
Walker	522 0 0
Hearle & Son	515 0 0
Palmer & Son	455 0 0

For the Erection of a New Building in Coventry Street, Haymarket. Mr. WILLIAM WIMBLE, Architect.

Ashby Bros.	£12,859 0 0
Dove Bros.	12,745 0 0
Kirk & Randall	12,640 0 0
Ashby & Horner	12,598 0 0
Bangs & Co.	12,420 0 0
Kilby & Gayford	12,343 0 0
Scrivener & Co.	12,196 0 0
Brass	12,189 0 0
Lawrence & Sons	11,916 0 0
Baylis	11,914 0 0

For Building Warehouse, London Wall.

Adamson & Sons	£4,740 0 0
Mark	4,674 0 0
Brass	4,565 0 0
Scrivener	4,542 0 0
Bass	4,500 0 0
Lawrence & Sons	4,487 0 0
Greenwood	4,442 0 0
Nightingale	4,381 0 0
Patman and Fotheringham	4,373 0 0
Boyce	4,373 0 0
Conder	4,285 0 0
Richardson	4,269 0 0

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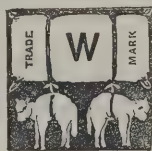
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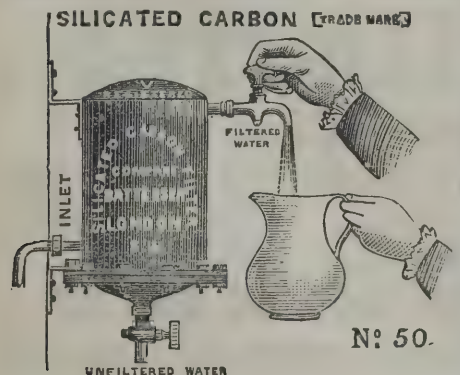
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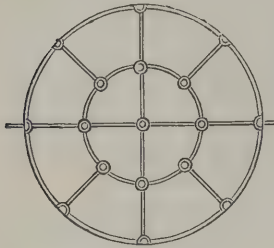
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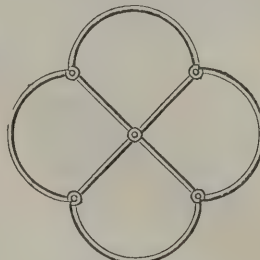
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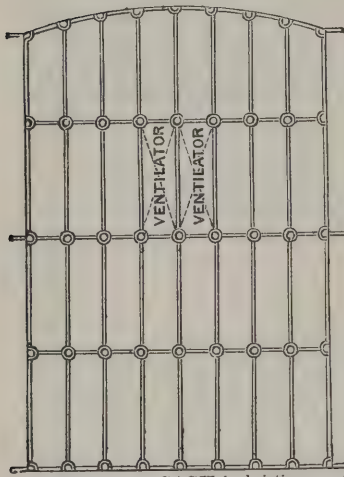
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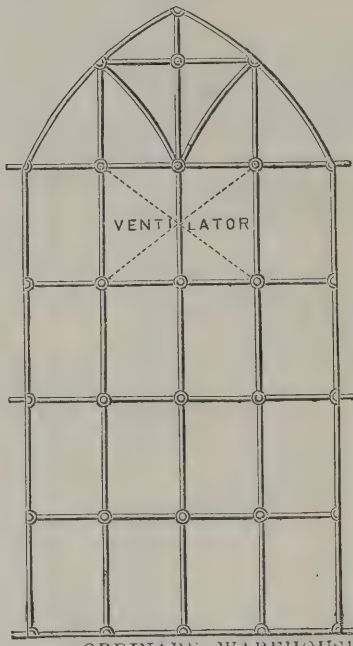
PRICES UPON APPLICATION.



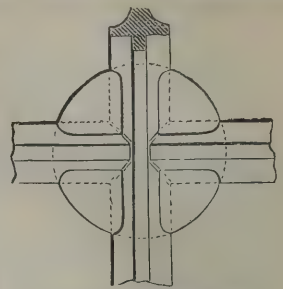
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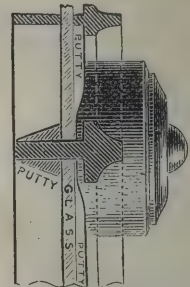
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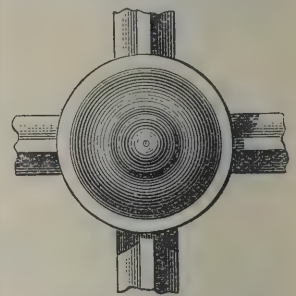


Back view of Boss, full size.

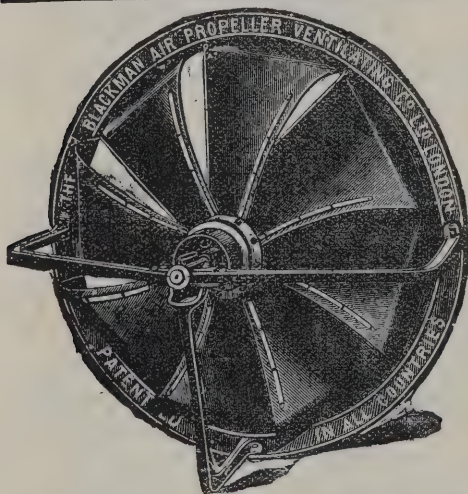


Section through Boss, full size.

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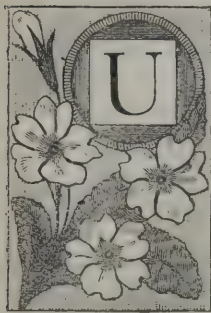
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# The Architect.

## THE INSTITUTE OF ARCHITECTS.



UNUSUALLY important business was done at the meeting of the Institute of Architects which was held on Monday evening last. The assembly was what is technically called an "Ordinary (Business) Meeting," being one of the four quasi-private sittings *per annum* at which, under the new system of administration, the members are permitted to discuss the affairs of the Society; they being at all other meetings arbitrarily prohibited from touching upon anything whatever except a "paper" appointed by the Council to

be then read. In furnishing such a statement of the proceedings as the character of the meeting admits of, we may premise that it was understood that war was in the wind. The dissatisfaction which for years back has been fermenting in the Society, with reference to what is euphemistically called a "want of sympathy between the Council and the body," had broken out in a mild eruption, which eventually developed itself in this official form—"LACY W. RIDGE, Fellow, to move, in reference to the Election of the Council, That in the opinion of this Meeting it is desirable that some alteration in the composition of the Council should be made at each Annual Election." There are many who will scarcely be able to believe, in these liberal and constitutional days, that any set of gentlemen in England composing the mere managing board of a professional association could permit themselves to offer serious opposition to a proposal like this. But, as matter of fact, not only was serious opposition meant, but it had previously exhibited itself in a somewhat imperious way.

By an original fundamental principle of the Institute it has been always the rule that eight members may demand the convocation of a special meeting of the body to discuss a question set forth. Eight members, accordingly, not long ago, so demanded that a meeting should be called to consider the question of introducing from time to time new blood into the Council. Instead of submitting the memorial, however, to the constituency, the Council, according to recent custom, intercepted it as a private communication, and dealt with it by graciously inviting the memorialists, like a deputation of schoolboys grumbling against the masters, to attend and discuss the matter *in camera*. The end of it was an official announcement (upon which we commented at the time it was published) that the Council thought the alteration inexpedient. To understand this better, it is necessary to be told that, somehow or other, the house-list process of election has enabled the Council, throughout the whole history of the Institute, to constitute itself a close vestry if so disposed; so that the refusal to entertain the idea of new blood implied the belief that the apathy of the members at large might be calculated upon to enable the gentlemen now accidentally in power under the recently altered by-laws to retain their ascendancy and enjoy its privileges permanently. It was as a protest against such unconstitutional and disloyal presumption that the motion we have quoted was notified; and the contest evidently became one that required a little generalship on the part of the obstructive party.

The Council, therefore, seems to have first resolved to throw a tub to the whale. A change was determined upon with reference to the Presidency and Vice-presidency. The election of the late Mr. STREET in 1881, in open defiance of the Council, had shown that the apathy of the constituency had at least a limit in one direction; and it was now proposed by the Council itself, as a concession on that ground, that the scheme of succession to the chair and the three vice-chairs should be abandoned, and the nomination thrown open.

In preparation for the meeting, certain correspondence had taken place in the columns of a professional contemporary, whereby Mr. JOHN WHICHCORD, a "past president" under the new system, had been induced to expound the advantages supposed to have been derived from it. Mr. WHICHCORD's letter was a clever one, of course, but, diplomatically, it blundered in two important points. In the first place, the

most telling and readable part of it bore a little too plainly the appearance of an acceptance of the maxim cited by DICKENS, "No defence—abuse the plaintiff's attorney;" and secondly, and chiefly, the writer had walked into a trap, by committing himself, as one of the responsible originators of the new system, to a catalogue of its results for the opposition to pick to pieces. In fact, not in this alone, but in almost every other step, Mr. BARRY as well as Mr. WHICHCORD, and even Mr. W. H. WHITE as their official henchman, appear to have entirely forgotten that they had to deal with a body of men who, by virtue of their everyday business, are *domini* by both law and custom, professional directors, by no means disposed to take things upon trust or to submit to arrogant dictation. At any rate, notwithstanding somewhat unpleasant weather, when Monday evening came there was a large attendance of members, indicating that the expected apathy had been broken in upon.

The business was opened by a somewhat dramatic statement, through the mouth of the amiable Honorary Secretary, of the arrangements made for the periodical Conference of Architects next May, to which everyone must wish all success. Popular applause being thus invoked, Mr. LANGSTON, an Associate, was invited to ask, according to notice given, "Why are not the whole of the proceedings reported?" It appeared, to the surprise of most present, that this scarcely conspicuous query referred to the omission from the fortnightly reports of "Proceedings" of some observations of doubtful utility and prudence; but the persistency with which a discussion was kept up which, in common parlance, was "all about nothing," seemed to indicate a good deal of restless feeling. The Secretaries at length promised attention to the matter, and the subject dropped—in fact, dropped as dead as a brickbat under the shot of a jovial anecdote by Mr. WOODTHORPE, in which he outwoodthorped himself in the direction of sound common sense accentuated by genial humour. One incident of the debate may, however, be mentioned. A casual phrase led to the question being asked whether it was now the rule of the "business" meetings that no matter could be spoken of by a private member unless admitted by the Council into the agenda. The Secretary actually replied in the affirmative, and appealed to the practice of "the House of Commons!" The meeting, however, seemed scarcely to appreciate the connection between No. 9 Conduit Street and the House of Commons, and so another point was accidentally scored against imperialism amidst universal laughter.

A proposal was next brought forward for making the "District-Surveyors-Examination" applicable to all sorts of local surveyors throughout the kingdom; and in spite of explanations from some of the examiners showing the impracticability of this, the President, knowing nothing of the subject, but impressed with the growing importance of making concessions to democracy, judiciously decreed that it should be done somehow.

The motion respecting the constitution of the Council at length came on. Several members spoke well and strongly in favour of the proposed change, but it was amusing to note how gradually it dawned upon them that it was possible for them to gain the day. The studied conciliation and profuse respect for "the Council" in the abstract with which the debate meekly and elegantly began to feel its way, presently, as if by accidental *lapsus lingue*, allowed a strong vernacular word to drop in here and there both expressively and pointedly, the speakers seeming to watch the anxious physiognomy of the President all the while, wondering why he postponed the awful duty of rebuking them. The term "clique" was first tried with fear, then tried with courage, and finally used without restraint. The principle that in order to oppose the house lists of a clique a "conspiracy" became indispensable, at first scouted as matter of decency, was presently recognised and forcibly dwelt upon as matter of fact. Mr. WHICHCORD had sent an excuse for remaining away, and Mr. BARRY, the other "past president," had to take upon himself the whole burden of the defence. Not a soul helped him. He was listened to with impatience. In short, although he carried himself courageously, his cause simply collapsed under the weight of an overwhelming revolt. The Council, as a last demonstration of organised defiance to public opinion, voted "solid," but constituted almost the whole of the minority. The official proposals for the abandonment of the absurd succession to the higher offices were then swallowed by the victorious con-



stituency at a gulp, with a hasty amendment involving the virtual exclusion of Honorary Fellows from the presidency, as if it were thought that even a compliment of mere courtesy to privilege so harmless as this could no longer be conceded.

We cordially congratulate the Institute upon what we regard as the overthrow of a most vicious and anomalous principle, only recently introduced, and calculated expressly, as everybody now clearly sees, to serve a few at the expense of the many. We hope to see as the result before long an entire restoration of that individual freedom which in this country is the only source of strength. One thing that is worthy of notice is the peculiarly businesslike way in which the honour of membership of the Council was weighed. All such honour is well known to carry with it some kind of substantial profit, or people generally would not accept it. This is usually courteously ignored, and thanks are demanded and bestowed for the labour performed. But on Monday night the meeting went directly at the practical root of the matter. "Gentlemen of the Council," the indictment ran, "confess that we others are exactly as good as you, and clearly understand that of the benefits derived from your position we must have our share!" Some fastidious people may perhaps think this was a trifle tradesmanlike; but it was at least honest.

### OLD MASTERS AT THE ROYAL ACADEMY.

THE winter exhibition just opened at the Royal Academy seems to mark distinctly the turn of ebb tide to that stream of "old masters" which has flown into Burlington House uninterruptedly for now fifteen seasons. The wonder of course is that the supply has lasted so long. Neither would it be fair to imply that as regards ancient schools the present show lacks interest; on the contrary, many good examples of Italian and German art are present—intrinsically valuable if not securely accredited—while, as usual, of Dutch and Flemish pictures a large number of indisputable merit have been lent by HER MAJESTY and private owners. Still, it must be granted that no signal work represents either school of the past: there is an end to the masterpieces, unless the Academy can begin over again, which would be very delightful but not wholly practicable, inasmuch as a number of the finest pictures that have appeared in Burlington House are now housed within our National Gallery, or at Berlin, Paris, or elsewhere under State control.

To commence with Italian pictures, which, after usual precedent, are distributed between the fourth room and the long wall of the central gallery. The principal lenders of early masters are Mr. CHARLES BUTLER and Mr. WILLIAM GRAHAM. The former sends several small pictures of early Florentine schools, among them a curious panel of *The Virgin Enthroned*, giving her girdle to St. THOMAS, who appears at one corner in half-figure, with arms extended in a rapturous attitude to receive it. This quaint piece, which has a very Siennese look about it, is attributed to LIPPO DALMASII, a Bolognese painter of the fourteenth century, a pupil of VITALE, and famous like BEATO ANGELICO for his devotion. One of the many copies or *replique* attributed to PIERO DELLA FRANCESCA of the profile head of *Sigismundo Malatesta*, Lord of Rimini, is lent by Mr. DRURY LOWE, and has at any rate more signs of the great Umbrian master than the *Head of Christ* sent by Mr. ROCHE, which distinctly has not the peculiar type invariable to FRANCESCA's heads of the Saviour. Among the most interesting contributions are the four portions of a panel frieze, stated to have been taken from a small room in the Gonzaga Palace of St. Martino, near Mantua, where a thick coat of whitewash has preserved them. The scheme of the frieze consists of a succession of marble niches with short columns, the colours being chiefly grey and reddish, with filling in of a greenish blue. Against the flat are painted in natural relief the heads and shoulders in profile of divers personages, male and female—one to each niche—all wearing some sort of head-dress, and repeating with variations a general colouring of black, pinkish red, and white, with flesh tints, and brown or black hair. The types vary from noble and refined to something almost grotesque in quaint coarseness; but each head is instinct with character and unmistakable portraiture, carried out apparently by a powerful but somewhat untutored hand in a rough, strong way, by some unknown painter of the Mantuan school. The medium was probably tempera,

but the panels have been varnished or treated with a waxy preparation, and appear even to have been patched with oil colour. The touch—especially in the hair—is that of a worker in tempera. These curious panels are lent by Mr. H. WILLETT. An old masters' exhibition without a supposed GIORGIONE is impossible, and Lady ASHBURTON lends her little *Landscape*, with figures of a lady and child and a knight, a much rubbed panel which is accepted as genuine, presumably because examples of early Venetian landscape *genre* of this character are always set down to GIORGIONE. Mr. HESELTINE sends an interesting Venetian *Landscape with Shepherd and Sheep*, a sort of rough pastoral, perhaps a study of background for some Nativity picture. *The Head of St. John on a Charger*, lent by Mr. DRURY LOWE, is probably Milanese in origin, or by a painter who passed under the influence of both Milanese and Bolognese schools; it is a beautiful work, very delicate and close in the modelling of the face, and full of expression.

An important triptych of the *Virgin and Child*, with angels and four saints, set down to RAFAELLINO DEL GARBO, the pupil of FILIPPINO LIPPI, from Mr. W. J. FARRAR'S collection, was, if we mistake not, formerly in the FULLER-MAITLAND. The central compartment, at any rate, might be accepted. The angels especially are of the sweet and intelligent type, with wistful brows, which we find in DEL GARBO'S work; at the same time, the cast of the draperies and set of hands and feet are more in character of a freer and later manner than the graceful affectation of the imputed author. A picture, lent by Mr. BUTLER, of the *Virgin and Child*, blessing with her hand on his head the donor, of whom only the head and shoulders and clasped hands appear, a parti-coloured curtain and landscape seen behind, is a good example of the early Venetian school, attributed to ANDREA PREVITALI, a pupil of GIOVANNI BELLINI. The colour is rich, a little bricky in the reds, and the picture is in good preservation. Within the chief gallery have been hung examples of later Venetian art, none of which are really first-rate. One of the best is lent from the National Gallery of Ireland—a portrait group of *A Gentleman with Two Children*, a grave work in the self-contained manner and chill colouring of GIANBATISTA MORONI of Bergamo. The composition is formal, and the children somewhat like puppets, but the man's head and figure are full of vitality, and his hands, placed on either shoulder of the children, are consummately modelled. The Marquis of LANSDOWNE lends a good portrait by BRONZINO of *Luigi Gonzaga*. It may be remembered that much of this painter's sincere and careful portraiture was executed for members of the GONZAGA family, and the allied house of D'ESTE. A fine specimen of the more showy portraits by TINTORET, in which the dignity of the subject is much due to sumptuous and heavy costume, is *General Duodo*, lent by Lord CLARENCE PAGET. Venetian views, by CANALETTO and GUARDI, of high quality, are lent from the Lansdowne Galleries by Lord EGERTON of Tatton and Lord MOUNT-TEMPLE. These records of Venice, by men whom it is now a fashion, in a certain set, to scorn, become more valuable every day, as old Venice very gradually disappears before modern destruction and modern restoration.

English collections are not strong in the Spanish school, but here and there a good picture comes to light. The MURILLO full-length seated figure of *Don Justino Francesco Neve* is rather black and heavy, but solidly painted, in the Sevillian master's naturalistic phase; a portrait of *Catharine, Duchess of Savoy*, is also admirable in the rigid manner and cold palate of COELLO; and the swarthy and funereal *El Corregidor di Madrid*, lent by Mr. LEYLAND, may be accepted as by VELASQUEZ on faith, as it is absolutely too black to be seen, except under a more searching light than finds its way into the gallery on a London winter's day.

In the fourth room will be found two admirable panels of the early German school, *A Holy Family*, set down to the "Master of Cologne," and *Two Female Saints*, St. BARBARA and another, half-length figures. The rich colour, use of complimentary tints in shading textures, and a certain suavity of type, would incline us to assign both these pictures to a Flemish origin; but the affinity between the Rhine school and that of MEMLING was often very close. Mrs. DAVENPORT lends an excellent example of MEMLING or his school—*A Virgin and Child with Saints*—the central figures in which are identical with those in the great Bruges picture in St. John's Hospital. The German pictures pass chronologically by a leap to the fine HOLBEIN, a half-length figure of *The Banker*, lent by the Marquis of LANSDOWNE, the interval being filled by nothing



important. The Flemish contributions are more numerous, and lead on to a couple of VANDYCK portraits, one of which, a full-length of *Queen Henrietta Maria*, lent by LOUISA, Lady ASHBURTON, is one of the best of the many portraits of CHARLES I.'s wife, painted by VANDYCK with the refinement and distinction that suited so well that high-spirited, high-bred lady. A tremendous canvas, meant for decoration of wall or ceiling, *The Glorification of a Prince of Orange*, in the most redundant style of VANDYCK's master, RUBENS, fills the centre at the head of the long gallery; a few portraits and studies follow, and one interesting landscape, *Farm at Laeken*, painted after the drier manner in which RUBENS sometimes approached PAUL POTTER and the men of the Netherlands, is lent from Buckingham Palace.

Dutch art, as we have said before, comes out well; most of the examples are gathered as usual into the second room, where can be found excellent specimens of TERBURG, STEEN, TENIERS, METSU, an exquisite MIERIS (*Lady and Cavalier*) from the Lansdowne Gallery, at least one good REMBRANDT (the *Portrait of a Lady*, from the same owner), and a couple of studies by FRANZ HALS (*Young Man playing a Guitar* and *A Cavalier*), full of vigorous character and broad, dashing brushwork. The landscapes are not particularly good; the most important RUYSDAEL, *A Storm*, is given honourable place in the chief room. The bird's-eye view of *Amsterdam* (145) is an interesting piece. Mr. LEYLAND's big WYNANTS, a wooded *Landscape*, with a road leading out into the open, shows the occasional closeness of this painter to the greater Haarlem landscape master. One capital little specimen of DE WITTE's cool and precise church interiors is lent by Mr. DE ZAETE. The two specimens of work by the Frenchman, BAPTISTE GREUZE—a portrait of *Gertrude, Baroness Dacre*, and a small study of an old man, *The Miser*—are appropriately hung among Dutch *genre* pictures, where their exquisite finish and purity of execution are not killed by too powerful contrasts of colour or manner.

It will be gathered from this summary of the old masters now in Burlington House that, although the splendid displays of past seasons are no longer to be looked for, yet a large number of pictures of interest and worth have even this year again been collected. It becomes, nevertheless, a question whether another winter should renew an exhibition which may give sanction and an adventitious value to examples of second and third-rate quality and genuineness. The cooking-up of old panels and manufacture of "old masters," the foisting of big names upon indifferent pictures, and the artificial raising of prices, have received under the competition of public bodies and private collectors alarming encouragement. The Academy council disclaims all responsibility as to the pictures which it admits; but the fact of admittance is by the outside buying and collecting public distinctly, and not unjustly, held as a guarantee up to a certain point, and hence the danger we have indicated. On the other hand, the galleries of the Academy do no doubt serve as a test-ground of quality. Amid the assemblage of pictures to a certain degree selected, and the discussion that arises among the knowing, even an "old master" is appraised by a closer and truer standard than the tradition of a family or the arrangements of a dealer.

The decadence of these winter exhibitions has, at all events, been very gently begun. The supply of English pictures of the last century is by no means exhausted, while the roll of "deceased British artists" becomes, alas! with every year a longer and more available source upon which to draw for the filling up of the winter exhibition. The pictures of PAUL FALCONER POOLE, R.A.—the deceased painter illustrated this year—must occupy us next week, together with examples of the English school, from the Anglo-Dutchman, Sir PETER LELY, downwards.

### PARIS NOTES.

THE exhibition of the works of the late M. Edouard Manet, the founder and chief of the "Impressionist" school, has been opened at the Ecole des Beaux-Arts. It comprises upwards of a hundred and fifty paintings, arranged chronologically, and thus affording the public an opportunity of studying the artist in his earliest and in his latest styles. With the exception of a limited circle of enthusiastic admirers of "Impressionist" art, the inspection of these canvases appears generally to have inspired both

critics and amateurs with a feeling of regret that so powerful an artist as M. Manet undoubtedly should have devoted his talents to a crotchet which, although helping him to attract public attention, can never receive the sanction of correct taste. In the works exhibited at the Quai Malaquais the colouring is chiefly remarkable for its crudity and carelessness, though exceptions are not wanting which prove that the artist, had he not been a slave to eccentricity, might have become a great colourist. As a draughtsman, his talent rivets the beholder, and makes evident the master hand beneath all the fantastic trickery of the innovator. Amongst the most noteworthy of the works on show is *Le Bon Bock*, which first compelled the public attention to Manet's claim to notice; but it must be added that the mannerisms of the artist are far less pronounced in this than in most of his paintings. Amongst other principal exhibits may be mentioned *Un Bar aux Folies Bergères*, exhibited in the 1881 Salon; *Le Déjeuner sur l'Herbe*, which figured in the exhibition of works refused admittance to the 1863 Salon; *Les Canotiers*, and portraits of Emile Zola, Rochefort, and Antonin Proust. M. Jules Ferry, President of the Council, accompanied by Madame Ferry, visited the collection on Saturday last, when upwards of 8,000 persons passed through the galleries, while a visit from the President of the Republic was expected on Friday, on which day the entrance was to be 5 frs. The exhibition is open from 9 a.m. until dusk.

An exhibition of M. Meissonier's works is announced to open at the Salle Georges-Petit on April 15. It will comprise about 150 of his pictures, including many lent from foreign countries. Queen Victoria has promised to send *La Rixe*, regarded as one of the master's best works, and belonging to Her Majesty's private collection. With the painting will be seen two wax statuettes, modelled by Meissonier, one representing a *Musketeer*, and the other a *Punch*. The artist, who is said to have already executed upwards of 400 hundred paintings, has lately commenced a large picture of *Bayard Knighting François I.*, amid a brilliant crowd of courtiers and knights.

The picture and sculpture galleries and the state rooms at the Luxembourg Palace, which had been closed during the last session of the Senate, are again open to the public. Several new works have been added, and the places of others changed since the museum was closed. Among the new pictures are Cot's *Mireille*, De Nittis' *Place du Carrousel* and *Place des Pyramides*, Carrier-Belleuse's *Gang of Asphalters*, Roll's *Cow*, and a fine drawing by Lhermitte called the *Old Home*. The added sculptures comprise *Saint-Jean* by Alfred Leloir, a *Venus* by Mercié, *La Fileuse* by Barrias, a *Cupid* by Marqueste, and *Narcisse* by M. Dubois.

The Direction of Fine Arts has decided on the creation of a special department at the Gobelins manufactory for the repair of tapestry belonging to the national collections. Some provision to this end has long been felt to be necessary, for tapestry-work deteriorates rapidly by the fracture of the threads, and the work of joining the parts imperceptibly is a difficult and delicate operation that can only be performed by experienced hands.

Two large bronze decorative vases have just been placed before the principal entrance of the Palais de l'Industrie in the Champs-Élysées. Their subjects represent the *Four Seasons*, and are the work of M. Ledru.

The Minister of Fine Arts has presented to the Chamber of Deputies, in the name of the State, an exact copy of Eugène Delacroix's picture of *La Chasse au Lion*, which was partly destroyed by fire in the Bordeaux Museum. The picture was 13 feet high by 17 feet wide, and was one of the chief works of the master. The copy is by his favourite pupil, M. Andrien, who was able to reconstitute it by the aid of the remains of the original rescued from the flames, and it is this reproduction that has now been placed in the Palais Bourbon.

The committee for the erection of a monument to Gambetta have invited French artists to send in designs. No conditions are imposed with regard to the site or the proportions of the work, the cost of which may amount to 350,000 frs. Models, one-twentieth of the finished size, must be lodged at the Ecole des Beaux-Arts



between May 25 and June 1, after which a selection of three of the works will be made, and, if neither of them is definitely selected, they will receive premiums of 10,000, 6,000, and 4,000 frs. respectively, according to their order of merit.

The monument to the great masters of landscape, Millet and Rousseau, for which a subscription was some time back opened by the artists who frequent, for purposes of study, the little village of Barbizon, on the edge of the Forest of Fontainebleau, has just been erected near that place, and will be officially inaugurated on Easter Monday. The work is by M. Chapu, and consists of a bronze tablet, on which the busts of the artists form medallions in high relief.

A special gallery devoted to exhibits illustrative and explanatory of the art of building in all its branches has lately been opened at the Conservatoire des Arts et Métiers.

The alterations lately made on the Place Denfert-Rochereau have necessitated the removal of the two last remaining rotundas of the old city boundary, sixty of which were erected in the year 1786 by the architect Ledoux. The Convention, on July 1, 1794, passed a decree by which they were to be put to a curious and characteristic use. Under this law they were classed as public monuments, and it was directed that the great events of the Revolution, and the victories gained by the armies of the Republic, should be inscribed thereon from time to time in characters of bronze, artists and men of letters being invited to contribute to the work of execution.

It seems scarcely credible that lighting by oil-lamps should still prevail to a considerable extent in the older quarters of the French capital. Yet that such is the case is abundantly proved by the notice just issued from the Prefecture of the Seine, inviting tenders for trimming and keeping in repair oil reflector-lamps to the number of 1,539. These old-world contrivances are principally to be found in the annexed communes, in the Faubourgs Saint-Jacques, Saint-Marcel, Saint-Antoine, and in the narrow lanes of the Saint-Martin quarter.

At its last sitting the Académie des Beaux-Arts had to appoint its officers for the present year. M. Guillaume was elected president; M. Bouguereau vice-president; while MM. Questel and Bailly, the outgoing members of the central administrative committee, were reappointed. The Academy has decided to petition the Minister of Fine Arts to increase the yearly scholarship payable to pupils at the Villa Medici in Rome, to the same amount as that received by those of the French school in the same city.

#### PROFESSOR DAWKINS ON ART STUDY.

AN address was delivered by Professor W. Boyd Dawkins, F.R.S., at the distribution of prizes to the students of the Brighton School of Science and Art. In the course of it he said there were two important requisites or corner-stones to the proper study of art. The first was that by which a student was enabled to see things. It was absolutely necessary, before anything could be represented properly, that it should be seen properly. He knew from his own experience that it was one of the rarest things in the world for a man really to be able to see a thing properly. But he did not know that a man could learn to see things outside himself properly better than by trying to represent them. A man could not realise the beauty of a figure or a landscape, unless he had attempted to draw them. Until he had a knowledge of the essentials to the production, until he could pick out the salient points in the landscape or figure, he doubted much whether any man could be said to have seen the one or the other. With regard to the second corner-stone, the power of representation, he thought there was as great a dearth in that direction as there was in the power of seeing. He believed that many artists who had reached the highest rank in their profession were deficient in the capacity of adequately representing what they saw. He therefore desired to impress upon the minds of the young art students that their first duty was to represent in their art what they actually saw, and what was true. They must study the conditions and master the surroundings of the picture which they had to represent, and, above all things, try to be true to nature. The Professor then called attention to a number of rough sketches of animals, fishes, &c., arranged at the back of the platform, which, he said, represented the earliest traces of art known in Europe. Pointing to

one sketch, that of a reindeer feeding, he said his audience would notice that the outline was wonderfully well done. Its unmistakable contour was clearly defined, and was altogether a piece of true art. When they saw such a figure they were perfectly certain that the individual who drew it represented exactly what he saw. Yet those drawings were originally produced upon fragments of antlers and of bone, and little pieces of stone, while the drawing implements those early artists had at their command consisted only of rude splinters of flint. Those drawings also indicated that the young artist should not begin with the brush, painting away with indistinct outlines, but first try to represent objects by bold outlines, which, he believed, was the best way of arriving at a thorough mastery of art. In conclusion, the Professor stated he would say a few words regarding some other things. He thought there was in this country most unfortunately an antagonism existing between hand-work and head-work. In this country there were two distinct lines, if he might so put it. There was one which he might call the professional line, where it was considered a very fine and estimable thing for a man not to work with his hand, but with his head or pen. That antagonism seemed to him most unfortunate, and he thought all students should bear in mind that it was a thing which really ought not to exist. It would not exist if it were not for an intensity of vulgar prejudice. He would say that the old craftsmen of Italy, those men who were the builders of Florence and other great cities, were men who had no prejudice of that kind, and he thought that, if they really wished to do their work in the world, they must get rid of that absurd and ridiculous prejudice as quickly as possible. The work truly done was equally noble, and the man who made a table to the best of his ability was equally great, as far as his work went, with the man who painted a beautiful picture or composed a beautiful piece of music. That consideration led him to another point, and that was—What was to be the end of all this higher education? It seemed to him that if the end of it all was the production of more professional men—more doctors, more lawyers, more clergymen, more professors, and more clerks—the less they had to do with it the better. The professional classes were being overstocked, owing to that vulgar prejudice, and if education was to be of any good it should aim at making a man better fitted to carry on his work in the world than he was before. His opinion was that the best education was that which would make a man better at his handicraft. If a man had the chance of pushing forward in the world let him do so, but if he tried to get out of his own line of life let him do it at his peril. It appeared to him a most ridiculous thing that a man who knew a great deal of Latin, or geology, or chemistry, should on that account think himself entitled to be supported by the State. The education he had in his mind, and which seemed to him to be the highest form of education, was that which was not confined to the rich, which belonged not to one class any more than the other, but to all, and which would enable all classes equally to do their work better in the position in which they found themselves.

#### LYCIAN ART.

THE first of a course of lectures on "Monuments of Lycian Art" has been delivered by Professor Newton, C.B., at University College, London. At the outset of the lecture he stated that the question we have to study in the case of Lycian monuments is how far they can be considered Greek, as Lycia was originally inhabited by at least two races who were certainly not Greek—the Solymi, who were a Semitic race speaking Phœnician in the time of Xerxes, and who at a later period were called Milyæ, and the people whose original name was Tremilæ, and who were afterwards called Lycians. This latter was a race belonging to the Aryan family, whose language is preserved to us in the inscriptions on many Lycian monuments, and is thought to be allied to the old Persian and old Armenian. At a very early period settlements from Greece and from Crete were established on the coast of Lycia. The myth of Bellerophon, as told in the "Iliad" by the Lycian hero Glaucos, must be accepted as legendary evidence of these early settlements. But the Greeks who got a footing in Lycia did not succeed in driving out or subjugating the races they found there as completely as they had done in the case of the Carians and Leleges, who in prehistoric times dwelt along the coasts of Caria and Ionia. It would seem from Homer and other ancient writers that the Semitic race called Solymi were driven back into the mountains on the east and north frontiers of Lycia, and that the people originally called Tremilæ became mixed with Greek settlers along the coast; but the Hellenic element thus gradually introduced was not strong enough to make the Greek language prevail over the native language till after the conquest of Asia Minor by Alexander the Great, when Lycia and many other provinces were more completely Hellenised. It is to the period between the conquest of Lycia under Cyrus and the overthrow of the Persian dynasty by Alexander that the most interesting monuments of Lycia belong, and to the same period we may assign the inscriptions in the Lycian language, and the interesting series of silver coins, struck by a number of autonomous cities and inscribed with their names in Lycian characters, but having on one side the



curious symbol called the Triquetra, resembling the Manx three legs. On turning to the scanty evidence to be found in ancient authors as to the history of Lycia, we find that there was one remarkable feature in their institutions—the confederacy of free cities, called by ancient writers the Lycian League. This league was probably in existence before the Persian war, and lasted through many vicissitudes and perils down to the time of Augustus, and probably later till the time of the Emperor Titus, who finally suppressed the autonomy of Lycia, uniting it with Pamphylia as a Roman province. Its organisation was so well contrived that the federation of so many independent states did not add to jealousies such as arose in Bœotia and other Greek leagues from the attempts of one member of the confederacy to domineer over the rest. It was the successful maintenance of the Lycian League through so many centuries which induced Aristotle to write a treatise on it, now unhappily lost; which induced Montesquieu to declare it the most perfect example of a league in history, and which has led Mr. Freeman to give so favourable and prominent a notice of it in his work on Federal Governments. The physical features of Lycia—a country broken up and intersected by high mountains, with fertile valleys and plateaux at rare intervals—favoured the division of the country into districts, something like the cantons of Switzerland, which were easily fortified and difficult of access. The lecturer here showed on a map the outlines of the geography of Lycia—its mountain ranges, of which the highest, Massikyts, on the western side, towers to the height of 10,000 feet; its rivers and their valleys, and its seaports, which in antiquity afforded excellent shelter for shipping, but of which several are now silted up with sand. Two of these harbours, Myra and Patara, are mentioned in the narrative of the voyage of St. Paul in the Acts of the Apostles.

#### GLASGOW ARCHITECTURAL ASSOCIATION.

THE usual monthly meeting was held on the 8th inst. in the Philosophical Society's rooms, the President in the chair. In view of the recent calamity which had befallen the Association in the destruction by fire of all its belongings—furniture, casts, library, and drawings—it was resolved to at once re-engage suitable premises and occupy as before.

Mr. William McNab read a paper on "Half-Timber Work," in which he gave a minute historical account of the different phases of English work, exhibiting prints illustrative of each. Continental timber construction was also noticed shortly. While fully appreciating the distinctive characteristics of Scotch architecture, Mr. McNab thought many of the features found in English domestic work quite suitable for a more northern climate, and their adoption would be a decided advantage.

The critic of the paper, Mr. John C. T. Murray, also approved of the reintroduction of half-timber work in Scotland, as, though there are but few examples existing, at one time it was undoubtedly pretty extensively employed in and about feudal castles.

#### THE GROWTH OF LONDON.

ON Tuesday last Sir J. W. Bazalgette, C.B., delivered his inaugural address as President of the Institution of Civil Engineers. The subject selected was the growth of London, than which nothing could be more appropriate, considering the position of the author as the engineer to the Metropolitan Board of Works. After a reference to the increase in the number of members of the Institution, Sir J. W. Bazalgette said:—

##### *Population and Traffic.*

London, or the metropolis as defined by the Metropolis Management Act of 1855, contains at the present time nearly 4,000,000 of people, covering an area of 117 miles, upon which are built 500,000 houses, giving an average of eight persons to each house, and nearly seven houses and fifty-three persons to each acre. Its population is equal to that of the whole state of Holland, is greater than that of Scotland, and double that of Denmark, and if it continues to increase at the present rate until the end of the century, it will then equal that of Ireland, as, indeed, Outer London now does. The value of property in London has increased even more rapidly than its population. In 1841 its rateable value was 6,000,000*l.* sterling, in 1855 it was 10,500,000*l.*, and at the present time it is 28,000,000*l.*, having increased nearly five-fold in the last forty-three years. But the traffic through London has increased even more rapidly than either its population or rateable value. The arterial lines of thoroughfare, which were wide enough half a century ago, are now altogether insufficient. Thus, for instance, although the Strand and Cheapside have been relieved by the formation of a new route between Charing Cross and the Bank, along the Victoria Embankment and Queen Victoria Street; and Holborn has been relieved by a new route from Oxford Street to Shoreditch; and new and widened streets continue to be made through the City and other crowded localities, the old lines of thoroughfare still remain congested by the traffic; 384,000 pedestrians and 75,000 vehicles now pass

over the metropolitan bridges daily; and the number of pedestrians increases at the rate of 4½ per cent. per annum, while the vehicles have increased at the rate of 13 per cent. The traffic on three metropolitan railways—viz., the Metropolitan, the Metropolitan District, and the North London, together increased between 1871 and 1881 from 79,000,000 to 136,000,000 per annum, or to 373,000 passengers per diem.

##### *Government.*

The government of the ancient City of London, by its Lord Mayor and Corporation, has up to the present time remained intact, with all its privileges and wealth; excepting that as part of the general municipality it sends three members to the Metropolitan Board of Works. But the metropolis has from time to time been placed under the management of various local authorities. Prior to 1848 there were seven independent commissions of sewers. These were then consolidated into one commission. In 1855 the principle of local self-government was adopted, and thirty-eight vestries or district boards, under the control of the Metropolitan Board of Works, were substituted, being representative bodies. The Metropolitan Board was also clothed with additional powers and duties; and these have almost every subsequent year been enlarged, until it has now become the administrative authority for over 100 Acts of Parliament, affecting the metropolis. The present Government, however, have contemplated the creation of a new municipality, which shall include the City and govern all the interests of the metropolis as a whole.

##### *Streets.*

In 1878 there were 1,710 miles of streets, roads, and courts, 1,338 miles of which were macadamised or flint roads of an average width of 30 feet between the channeling, and upon which was laid in the course of the year 307,700 tons of macadam, flint, or hoggins; 274 miles were granite paved roads, 61 miles were paved courts, 15 miles wood-paving, and 22 miles asphalt; but since that period wood-paving has been extensively substituted for some of the other kinds.

##### *Drainage.*

There are now about 2,300 miles of underground covered sewers, more than half of which have been constructed during the last twenty-seven years. They vary in size from 9 inches to 12 feet 6 inches in diameter. All the houses are connected with them, and the house refuse and the most offensive decomposing matter is removed through them by the water supplied to the houses flowing through the sewers after use, in an unobtrusive, inoffensive, and economical manner, and without manipulation of any kind. The waste water thus becomes the motive power or carrier for conveying the refuse to covered reservoirs on the banks of the Thames twelve miles below London Bridge. These reservoirs are 16 acres in extent, and capable of containing 60,000,000 gallons; and an average of about 150,000,000 gallons of sewage and rainfall are discharged at the outfalls into the river daily on the ebb tides. The main intercepting scheme was practically completed and came into operation in 1870-71; and, considering that the mean annual death-rate in London was in the decade ending 1850 24·8 per 1,000, in that ending 1860 23·7, in that ending 1870 24·4, and in that ending 1880 it had been reduced to 22·5, and for the year ending 1882 was only 21·4, it may not be unfair to claim for those works a considerable share in this decrease of the deaths. But a decrease from 24·4 to 21·4, or three persons per thousand, represents about 12,000 lives saved every year in London, and a proportionate increased length of life to the living. The death-rate for the past year has not yet been published, but it will probably be found to be about 1 per 1,000 lower than in 1882, so that the improvement since 1870 has been continuous, and the annual saving of life now as compared with 1870 is about 16,000.

##### *Water Supply.*

London is at present supplied with water by eight independent water companies. They supply in the aggregate 140,000,000 gallons daily, of which from 15,000,000 to 18,000,000 are consumed outside the metropolitan boundaries. The consumption within the metropolis is at the rate of about 31 gallons per head per diem. Of the total quantity, 69,000,000 gallons are obtained from the Thames, and 71,000,000 from the River Lee, the New River, and other sources. The charges of the water companies for the water are, with minor exceptions, based upon the rateable value of the houses supplied, and not according to the quantity of water consumed; that is to say, by their Acts of 1852, the Chelsea, the Grand Junction, the New River, and the West Middlesex Water Companies are authorised to charge 4 per cent. on houses rated under 200*l.* and 3 per cent. on houses rated over 200*l.*; and the East London and the Southwark and Vauxhall to charge 5 per cent. on the rateable value of all houses; while the Lambeth, by their Act of 1848, may charge water rates varying from 7½ per cent. on small houses to 5½ per cent. on houses rated over 100*l.*; and the Kent Company, by their Act of 1864, may charge from 6 per cent. on small houses to 4 per cent. on houses rated at 90*l.* and upwards; and all the companies are authorised to make additional charges, fixed according to rateable value, for baths and waterclosets, and in some cases for high service. But inasmuch



as the rateable value of the houses in London has risen since 1855 from 4*l.* per head to 7*l.* per head of the population, and the consumption of water per head has remained the same, the price of water, as based upon the rateable value, is now 75 per cent. dearer than it was in 1855; and there is no reason to doubt that so long as the price remains a fixed charge upon the rateable value of the houses, the cost of each gallon of water consumed and the value of the property of the water companies will continue to increase in every future year in the like ratio. The total capital employed by the water companies is about 13,200,000*l.*, or at the rate of 61*7d.* per 1,000 gallons of water supplied, and the net charge for water amounts to 7*3d.* per 1,000 gallons; while the annual cost of pumping and maintenance of works is 1*1d.*, and the cost of engineering and management is 2*1d.* per 1,000 gallons, showing a net profit of 4*1d.* per 1,000 gallons. In 1880 it was proposed to purchase the interests and property of the water companies, and place the water supply under the municipal authority, as it is in Glasgow, Manchester, Liverpool, and in most foreign cities; and an arbitrator between the Government and the water companies valued their interest at that time at 33,000,000*l.* The mode of charging upon the rateable value of the houses, instead of by meter, moreover, makes the payment for the quantity consumed fall very unequally upon the consumers. If charged by meter, a very effective check would be put upon the serious waste which now takes place. A purer and more copious supply of water on constant supply and at high pressure is demanded, and whether this is to be attained by purchase or by some regulation of the present water companies' powers, it is obvious that each year's delay will only increase the cost and the difficulties involved.

#### *Gas and Electric Lighting.*

The lighting of the metropolis is effected mainly by three gas companies, at a cost varying from 2*s.* 10*d.* to 3*s.* 2*d.* per 1,000 cubic feet. Over 20,000 millions of cubic feet of gas per annum are manufactured out of two millions of tons of coal, and it is distributed through pipes, the total length of which is about 2,500 miles, and they vary from 3 inches to 4 feet in diameter. The cost of lighting London by gas is therefore about 3,000,000*l.* per annum, or more than double the cost of its water supply. But electric lighting is rapidly advancing; and, in confirmation of Dr. Hopkinson's opinion that it may be looked upon as the lighting of the future, it may be mentioned that when, in 1878, the Jablochhoff Company commenced lighting a portion of the Victoria Embankment, the charge for each lamp was 5*d.* per hour. At the end of three months the price was reduced to 3*d.* Six months later it was reduced to 2½*d.*, and since June 1881, forty lights on the Embankment and ten on Waterloo Bridge have continued to be lighted at the rate of 1½*d.* per light per hour. Each of the electric lamps on the Embankment gives an illuminating power of 265 candles, so that, at the charge of 1½*d.* per hour per lamp, the cost per 1,000-candle power is 5*66d.* per hour; while gas, at 3*s.* per 1,000 cubic feet, and consuming five cubic feet per hour for every sixteen candles, costs per 1,000-candle power 11*25d.* per hour. In other words, twice the illuminating power is at present obtained on the Embankment by electric lighting for the same money if expended on gas. But it has been stated that the Jablochhoff Company are losing money on this contract. Incandescent lighting, though much more costly in production, is more economical in the regulation and distribution of the light.

#### *Bridges, &c.*

Eleven of the bridges over the Thames, on which tolls were levied, have been purchased, and made free of toll within the last five years. At Hammersmith, Putney, and Deptford Creek new bridges are in process of construction. A new bridge at Battersea will shortly be built, and others have been strengthened with new chains or deeper foundations. But, considering that over 1,500,000 people live east of London Bridge, that is to say, a greater population than exists in any city in the world, except London and Paris, it cannot be doubted that there is still a great need of improved communication across the river below London Bridge. The Victoria, the Albert, and the Chelsea Embankments of the Thames are a total length of about 3 miles, and by them 52½ acres of mud foreshore have been reclaimed from the river and converted into thoroughfares and ornamental gardens.

#### *Protection against Fire.*

Since 1865 the extinction of fires and the saving of life and property from fire has been a duty cast upon the municipality, and a brigade is maintained, under the direction of Captain Shaw, containing 54 land-engine stations, 4 floating engines, 124 fire-escape stations, 576 firemen, 41 steam and 115 manual fire-engines, besides tugs and other appliances. There were, in 1882, 1,926 fires, of which only 164 resulted in serious damage, and only 36 persons lost their lives, owing to the able management and gallant conduct of that small staff. The consumption of water in extinguishing fires is about 17,000,000 gallons, and the cost of the brigade is rather over 100,000*l.* a year.

#### *Police, &c.*

The metropolitan police outside the City are under the supervision of Commissioners appointed by the Government; but the

Corporation of the City appoints its own police. They number in all 13,000; the area protected by them extends over Outer London, and covers 700 square miles, and the proportion of police to the population is rather less than in Paris, which is one in 373. But the area over which the metropolitan police are scattered is twenty-three times larger than Paris, and it is satisfactory to know that, in spite of the amount of crime which escapes detection and punishment, London is the safest capital for life and property in the world. There are in London about 10,000 cabs and 2,000 omnibuses or stage-coaches, under the management of the metropolitan police.

#### *Parks.*

The parks, commons, and open spaces which are available for public recreation within the metropolis, and which form the lungs of London, are 42 in number, and contain about 4,490 acres, exclusive of the squares, or about 6 per cent. of the whole area of London; while just outside the boundary are Epping Forest, Richmond Park, and Wimbledon Common, together containing over 9,000 acres more.

#### *Markets.*

There are 14 markets of various kinds. The most important of these are:—Farringdon dead meat and poultry market, and Deptford foreign cattle market; Islington cattle markets, 15 acres in extent; Billingsgate fish market and Covent Garden vegetable market; and into these markets are imported annually, for consumption in London, about 800,000 head of cattle, 4,000,000 of sheep, calves, and pigs, also 9,000,000 of fowls, game, and rabbits, and over 100,000,000 of eggs, and a like number of oranges and lemons. About 320,000,000 of quarter loaves are consumed in London annually. Billingsgate fish market covers only half an acre, and, being insufficient for the supply of fish to the whole of London, a new market is contemplated. Thirty-five thousand vessels and 100,000 fishermen are employed in catching fish upon the coasts of the United Kingdom, and, besides the fish exported, 400,000 tons of fish are consumed in this country, of which 130,000 tons are sent to London, two-thirds by rail and one-third by water. The average wholesale price of fish sold in Billingsgate is 1½*d.* per lb., but the consumer does not get the benefit of this low rate; and to enable the poorer classes to enjoy the food which so abundantly surrounds our shores, a market is needed which shall be accessible to all railways, having the means of storing fish in dry air at a temperature of 34 degrees, and accompanied by the means of rapid distribution to all parts of the metropolis.

#### *Comparison with Paris.*

Paris contains a population of 2,240,000, occupying 77,000 houses, and covering an area of 30 square miles. This gives an average of 29 persons per house, and 4 houses and 116 persons per acre. Paris, therefore, is more than twice as densely peopled as London, and each house in Paris contains nearly four times as many inmates as the London houses. Its rateable value is 24,000,000*l.* sterling, being not quite one-third less than that of London. It has 582 miles of streets, upon which are laid 73½ miles of tramways, and the total length of its sewers is 440 miles. Great care and labour are expended in cleansing and watering the streets and ornamental spaces in Paris. From a surface of over 13,000,000 square yards of street are removed annually 100,000 cubic yards of deposit, equal to a depth of ¼ inch of mud, dust, and garbage spread over the whole surface. The cost of street-cleansing in 1881 was 245,000*l.*, with a further expenditure of 82,000*l.* for removing snow. The annual rainfall is 22 inches. The water supply amounts to 82,000,000 gallons per diem, being at the rate of 36 gallons per head of the population. Two-thirds of this are obtained from the rivers Seine, Marne, and Ourcq, and one-third from distant springs and artesian wells in Paris. Its sewers vary in size from 6 feet 6 inches by 3 feet to 18 feet 5 inches by 14 feet 5 inches; but the larger ones are, in fact, subways, containing galleries with a channel in the centre, and water-pipes overhead. The construction of these has cost over 4,000,000*l.*, and their cleansing and maintenance about 50,000*l.* a year. A small portion of the sewage is disposed of by the irrigation of garden ground in the neighbourhood of Paris, but by far the greater portion is still removed out of the city in cans by carts. In 1869 600,000 cubic yards were thus removed, at an annual cost of about 2*s.* 3½*d.* per head of the population. There are four abattoirs under the administration of the municipality. Paris is lighted by gas lamps equivalent to 44,000 lamps of one burner each, which consume 770,000,000 cubic feet of gas, at a cost for gas of 130,000*l.*, or about 3*s.* 4*d.* per 1,000 cubic feet, and a total cost of 190,000*l.* per annum, including lighting and maintenance. This latter sum includes also the electric lighting of the Avenue de l'Opéra, the Cours de Louvre, and the Carousel; but this does not include the cost of lighting the private houses. There are in Paris 600 omnibuses, 520 tramcars, 500 steamboats on the Seine, over 8,000 cabs, and the city is protected by a force of 6,000 men acting as police.

#### *The Artisans' Dwellings Question.*

Prior to the introduction of the Artisans' and Labourers' Dwellings Act of 1875 much had been done by private efforts to improve the dwellings of the poorer classes. No fewer than 28 associations



had been formed with this object, and had provided improved homes for 32,435 persons, at a cost of about 1,200,000*l.*, and at an average rental per week of from 2*s.* to 2*s.* 9*d.* for one room, 3*s.* to 3*s.* 6*d.* for two rooms, and 4*s.* 6*d.* to 6*s.* 6*d.* for three rooms. The return realised upon the outlay varied from  $2\frac{3}{8}$  to  $6\frac{1}{4}$  per cent. The average cost of eight blocks of buildings erected by the Metropolitan Association, including the purchase of land, or, where leased, the ground-rents capitalised, was at the average rate of 41*l.* per inhabitant, varying from 29*l.* to 81*l.* But these associations had the advantage of selecting such vacant sites as they could obtain on the most favourable terms; while under the operation of the Artisans' Dwellings Act, the houses on any unhealthy district for which the new buildings are substituted must first be purchased compulsorily, as well as the public-houses and shops which are frequently mixed up with them, with all their trade interests, at a very heavy cost, and then cleared, and new thoroughfares and sewers constructed. Twelve areas, situate in different parts of London, embracing an aggregate area of 40 acres, in which the houses were overcrowded and declared to be unfit for human habitation, have been already dealt with by the Metropolitan Board of Works, at a cost of 1,500,000*l.*, and some further areas by the Corporation. In several areas the houses have been pulled down, new streets formed, and new buildings for the working-classes erected on the sites, and in others the works are in various stages of progress. The cost of the new buildings has varied from 6*d.* to 8*d.* per cubic foot of the building, and the sites which have been cleared for their erection have been sold at prices ranging from 2*s.* to 5*s.* per foot super.

Inasmuch as the cost of a building depends mainly upon its size, it becomes necessary to consider what is the minimum air space which can, with due regard to health, be allotted to each inmate. In the dormitories of poorhouses and prisons a breathing space of from 450 to 500 cubic feet, with proper ventilation, has been deemed requisite for a healthy man; and two children have been estimated as equal to one adult. The police requirements for the common lodging-houses are 240 cubic feet per head, and 450 cubic feet are allowed to each policeman lodged at a station. The Poor Law Board allowed 500 cubic feet per head in sick wards, and 300 feet for every healthy person in dormitories. Now, 300 cubic feet per head means a room for two people, 8 feet high and  $8\frac{3}{4}$  feet square, or four people a room 8 feet high and  $12\frac{1}{4}$  feet square; while 500 cubic feet per head means a room 8 feet high and  $11\frac{1}{4}$  feet square for two people, and a room 8 feet high and  $15\frac{3}{4}$  feet square for four adults; 500 cubic feet per inhabitant have been generally allowed in carrying out the provisions of the Artisans' Dwellings Act; and as the doors and windows of the new buildings are larger, and the surrounding streets and open spaces much wider than previously, the ventilation of the new buildings is superior to that of the old ones and the condition of the atmosphere is thus rendered purer, although this air space is less than could be desired.

Nevertheless in comparing the death-rate which has been below the average of that of the metropolis in the new buildings, and the death-rate of the unhealthy localities for which they were substituted, it must not be forgotten that the comparisons refer to a totally different class of persons; all the habits of the persons displaced being eminently conducive to the shortening of life. A practical difficulty is, moreover, involved in every attempt to provide suitable houses compulsorily for the poorer classes—namely, that they object to be placed under any supervision or restraint, and cannot afford to pay the rents necessary to defray the cost at which the improved accommodation can be so provided, and even where low rents have been offered it has been found that the new dwellings became inhabited by a better class than those who have been displaced from the unhealthy localities, and the occupants of these are driven into other poor neighbourhoods, which are thus again rendered overcrowded and unhealthy. This, in fact, constitutes a great social dilemma, for while on the one hand the importance of suitable and healthy dwellings for the poor will be readily admitted, it may fairly be questioned whether it is just to throw the increased charge upon the rates, so that the man who is able only by industry and self-denial to pay his own rent, should be taxed for the rent of his less industrious and more self-indulgent neighbour; and why, he may fairly ask, if he is to pay a portion of his neighbour's house rent, should not the cost of his neighbour's food and clothing also be defrayed out of the public funds? In order to be brought under the operation of the Artisans' Dwellings Act it becomes the interest of the landlord of the dwellings of the poor to allow them to fall into a condition which renders them unfit for human habitation, so that they may be purchased compulsorily, and the higher the rents the larger will be the amount of compensation he will obtain. It ought, on the contrary, to be made a disadvantage and loss to him to have his property declared unhealthy. This property is frequently sublet to middle-men who collect such rents as produce a very high rate of interest on its value. What is needed is a more strict supervision by one competent authority, having no local interest, so that all places may be judged by a uniform standard. The provisions of the Common Lodging Houses Act, 1851, or of the Public Health Act of 1866, and the Artisans' Dwellings Act of 1868, 1879, and 1882, might be

modified, and the authority armed with more summary powers to oblige the landlords to repair and maintain their houses in a habitable and cleanly condition, and to prevent the demoralising influence of overcrowding; and in case of default, after due notice, such houses should be pulled down in the same manner in which "dangerous structures" are now dealt with under the Building Act of 1855. If the sites so cleared were sold for the erection of new dwellings for the poor, and money advanced for their erection at a low rate of interest, coupled with restrictions as to the class of building, and limiting the number of occupants, and the rents to be charged, the existing dwellings of the poor would be maintained in a proper manner, or new ones would be substituted at low rents. The new dwellings would, nevertheless, become occupied by the labouring classes in receipt of regular wages, to whom undoubtedly a preference would be given; and the helpless and the depraved, who now seek shelter in overcrowded slums, would eventually be driven into the workhouses or common lodging-houses.

Longevity and premature decay are doubtless influenced by the food and general habits of the people, and by temperature and other local atmospheric conditions, although all these may be largely modified and brought under control by attention to sanitary laws and appliances. Artificial atmospheres are in fact created in large cities according to the character of the buildings, the air-space allotted in them to each inmate, and the mode of ventilation and warming, as well as by the width of the streets, the sewerage, and other sanitary arrangements. Moreover, the hereditary constitutions of the citizens become in after generations affected by the condition of the cities in which they and their forefathers have lived. The facts and figures before us point to many of the causes for so great a variation in the death-rate as has been shown to exist in different cities. A high death-rate will in most cases be found to be the companion of defective house accommodation, ventilation, water supply, sewerage, or scavenging. Thus, for instance, St. Petersburg, with a population of nearly a million, and the high death-rate of 35·2 per 1,000, is without sewerage, and its water-supply is taken from the River Neva, more or less contaminated by percolation from the subsoil. Cairo, with a death-rate of 37 per 1,000, is supplied with water from the Nile, having no sewers, and the sewerage filtering through the subsoil into the Nile above the water intake. Vienna, with a death-rate of 29·2 per 1,000, has an average of 60 people in each house, or twice as many as in Paris, while the rateable value of the houses in Vienna is only one-sixth more than those in Paris. Peking, with a death-rate of 50 per 1,000, is without proper sewerage, water-supply, street-cleansing, or other proper sanitary arrangements. The subject thus briefly touched upon largely affects the life and well-being of mankind, and is sufficiently interesting to invite closer and more exhaustive investigation under every variety of circumstances.

## THE SIZE OF BRICKS.

THE best method of developing the art of building in brick has occupied the attention of architects and engineers in Switzerland for some years, and with this view it has been determined to attempt to fix a certain standard size of brick, and a report was presented to the Swiss Society of Architects and Engineers, in which the dimensions recommended were 9·84 inches by 4·72 inches by 2·36 inches. As, however, these dimensions were not agreed to by all sections of the society, a special federal commission was appointed in December 1882, to inquire into the subject.

A report was presented to the General Assembly of Cantonal Delegates at Berne, by M. Favod. The author first of all gives a brief account of the bricks that were used by the Assyrians, Egyptians, and other ancient peoples. He then gives tables of the dimensions of the bricks that were used from remote periods up to the seventeenth century, and of those in use at the present day in Italy, France, England, Belgium, Austria, Germany, and Switzerland. From these tables he shows that the standard size should be between the limits of 4·45 inches long, 4·33 inches broad, and 1·97 or 2·56 or 2·76 inches thick; and 11·63 inches long, 5·12 inches wide, and 1·97 or 2·56 or 2·76 inches thick; or, taking a mean, the size should be 9·84 inches by 4·72 inches by 2·36 inches. This size is made at the present time, as is also that of 9·84 inches by 4·72 inches by 2·76 inches. The author is greatly in favour of the thicker brick, and a great deal of the paper is taken up with a discussion of the possibility of properly burning it, many of the Swiss brick-burners having stated that they cannot burn bricks having a greater thickness than 2·36 inches. In reference to the thicker bricks he remarks:—1st. That the other dimensions remaining the same, the resistance increases with the thickness. 2nd. There is, perhaps, rather more difficulty in drying a thick brick, but care in mixing the beds of clay, the addition of sand, gradual drying, &c., will readily get over it. 3rd. In burning, the bricks must be carefully placed in the kilns, as the gas will follow the shortest route to the outlet; the bricks must be arranged so as to oppose obstacles to its escape in this direction, while facilitating its passage by the longer route.



The bricks after being dried in the sheds, should be further dried by hot air from the kilns before being burnt. All apertures by which the air could pass into the kilns must be carefully closed, and the cooling of the bricks must be gradual. 4th. When colour is of importance, attention must be paid to the fuel. Coals of inferior quality frequently contain extraneous matter which is deleterious to good colour, and also to the weathering qualities of the bricks, and is sometimes the cause of efflorescence. 5th. With the same materials there will be a better output of first-class bricks with a 2.76 inch than a 2.36 inch thickness, because vitrification does not begin so soon. Of course, the best quality cannot be obtained from clays which are very chalky, earthy, or sandy, but with careful manipulation very fair bricks may be made from very moderately good earth.

The author conducted some experiments at the Horn brick-fields of M. Bourry, where the bricks are made by machinery and burnt in Hoffman kilns. These experiments were performed with eight varieties of earth, three blue, three yellow, one sandy, and one earthy. Bricks were made from each variety separately, and also from mixtures of different kinds; their dimensions were 9.45 inches by 4.53 inches by 2.76 inches. They were dried under different conditions, according to their kind, and burnt carefully in kilns with other bricks. The result was that each different clay and each mixture produced bricks of different colours, but all well-burnt and sound.

With regard to the question of price, of course if the manufacturer sells his bricks by the thousand, without reference to size, the smaller they are the better for him. The contractor, too, is apt to prefer small bricks, because with them he uses more mortar, which costs him less; but, on the other hand, he requires more bricks per cubic yard (the number of bricks of different sizes in a cube metre of work are given), and there is more labour in setting them, so that what he gains in one way he loses in another.

In regard to the quantity of mortar Dr. Boehme's experiments at Berlin in 1875 proved that no more mortar than was actually necessary to keep the course horizontal and effect the cohesion of the bricks (for which purpose joints of 0.4 inch [thick] are ample) should be used, as, whether the mortar becomes more or less hard than the bricks, the result is in either case to reduce the strength of the work. Experiments made with blocks of twenty sound bricks, one set of blocks cemented with various kinds of mortar and cement (the joints 0.4 inch thick), another set consisting of bricks laid dry, and surrounded with cement simply to keep them together, gave as mean resistances to compression:—For the first set, 1,618 lbs. per square inch to cause splitting, 1,934 lbs. for the destruction of the bricks; and for the second set 2,202 lbs. per square inch to cause splitting, and 2,291 lbs. per square inch for destruction, showing that the dry bricks gave a mean resistance of one-third more than those set with mortar before splitting, and one-fifth more before destruction. The author, therefore, concludes that to secure the greatest strength thick bricks with a minimum of mortar should be used.

The author suggests that the price of bricks per thousand should vary according to the number required per cubic metre of work, so that the manufacturer may be paid according to the size of the bricks. Finally, he recommends that the standard brick should have the dimensions 9.84 inches by 4.72 inches by 2.56 inches.

## CHURCH BUILDING IN DURHAM.

A MEETING has been held in Durham to promote the erection of twenty-five new churches. The Bishop of Durham, in addressing the meeting, said:—

I think that if we estimate for each church the sum of 3,000*l.* as an average, it will certainly not be regarded as an exorbitant sum. The requirements, therefore, will be 75,000*l.*; but I have put the sum at the minimum, because I don't think it right that a committee like ours, using public funds, contributed as ours will be, ought to run into any lavish expenditure on mere decorations. All we have to do is to erect seemly substantial buildings which will be convenient for public worship, and which will satisfy the requirements of the Commissioners. But I might say, perhaps, in passing, that it would do my heart good if I saw rising occasionally in this diocese, as I see more frequently in the south, some stately and beautiful ecclesiastical edifice which would be a joy for ever—which by its beauty and its solemnity would educate the feelings and stimulate the reverence of generations to come. This, however, must be a matter of private munificence. It does not come within the purview of our committee. We shall be strictly economical in distributing the funds which you shall be pleased to place in our hands. The 75,000*l.* which these churches will cost must be got somehow. We may expect contributions from the Ecclesiastical Commissioners where they have much property, contributions from church building societies, and donations from other sources; but the chief part of it must be raised either by this general committee or by local organisations. I say I think that this general committee ought to strive to raise no less than 50,000*l.* or 60,000*l.* of the money required. I say this for the following reasons:—First of all, I have said nothing about mission rooms. Obviously there

will be a great development in the future in this direction. In the second place, the very idea of this general committee of this central fund is the equalisation of burdens. The richer neighbourhoods will then be able to help the poorer ones. Those who in spiritual things are amply provided for by the generosity and munificence of previous generations ought not to consider themselves absolved from giving because they have no local interest in the districts affected by this scheme. They are especially bound to give because they themselves are reaping the benefits of the gifts of the past. But you will ask, Can we do it? Can we raise this sum? I say emphatically yes—yes, if you have the mind to do it. I was speaking to the Bishop of Rochester the other day. He not long ago, you may remember, put forward a scheme for the building of ten churches, which were to cost 50,000*l.* He informed me within a twelvemonth he had got 42,000*l.* of the 50,000*l.* required. But you will say Rochester is not Durham. Well, then, I will refer you to certain facts in the history of our own diocese. I take the calendar for 1879, which gives an account of the efforts made during the episcopate of Bishop Baring. I find that in seventeen years the sum of 700,000*l.* was raised for building new churches, for enlarging and restoring existing churches, for providing burial-grounds, and for erecting school buildings. Of this 700,000*l.*, 543,000*l.* is set down to the building of new churches, restoring and enlarging old churches—more than 30,000*l.* a year you see. Now, the diocese has been diminished since then. We may say, roughly speaking, that it has lost one-third; but it has certainly been increasing in wealth, and inasmuch as the annual sum which I ask for is very considerably under this, I think that we ought not to hesitate about the matter or feel faint-hearted. But there is another subject for encouragement. We do not enter upon this scheme empty-handed. Certain local efforts had been already made for the erection of some of these churches. Towards the erection of the three Gateshead churches 6,500*l.* has been already contributed. I include in that 1,500*l.* from the Ecclesiastical Commissioners. For one of the Hartlepool churches 1,400*l.* has been contributed, besides the gift of a site. For another Hartlepool church 450*l.* has been subscribed, and for the Crook church about 900*l.* Besides this, there is the church of St. Paul's at Stockton, and there is also the church at Deaf Hill. The amounts contributed in these two cases I cannot tell you exactly; but I hold that there must be already promised for these eight churches between 11,000*l.* and 12,000*l.* For the Gateshead scheme Sir Walter and Lady James contribute 3,000*l.*, Mrs. E. Joicey 500*l.*, Mrs. Carr-Ellison 300*l.*, the rector of Gateshead 300*l.*, Mr. James Joicey 200*l.*, besides a large number of subscriptions of 50*l.* and 30*l.*, and downwards. I turn to the Hartlepool list, and besides the gift of the site, which is valued at 600*l.*, by Mr. and Mrs. Walker, Mr. Thomas Robinson gives 500*l.*, Mr. W. H. Fisher 250*l.*, and Mr. R. H. Young 100 guineas. There are also several contributions which I would like to read, but I cannot for lack of time, of fifty guineas and below. For the Crook church Messrs. Straker and Love give 500*l.*, Mr. John Straker himself adds another 100*l.*, Messrs. Pease & Company give 125*l.*, and there were other donations, some of them very large ones. We have, then, this sum already in hand, but I am glad to say that, without any solicitation, since the general scheme was mooted, several very large, and some of them munificent, subscriptions have been offered. The Earl of Durham has promised a very munificent contribution, but as he will address you presently I will leave it to him to mention it. I can only thank him for his munificence. The Dean of Durham contributes 300*l.*, the Archdeacon of Durham 500*l.* Mr. Carr-Ellison has allocated to Hebburn, one of the churches in question, if I understand rightly, 1,000*l.* I have also received by letter promises of 100*l.* from the following gentlemen:—Mr. Thompson, M.P. for Durham, Sir J. Mowbray, M.P., Mr. R. Vint, Mr. H. Chaytor, and Mr. R. A. Burrell. There is one contribution which I must mention, because it was the first largest offering, and that is a contribution of 50*l.* from the Rev. J. Brown, of Silksworth. The Archdeacon of Durham has just handed me in a promise of a contribution of 50*l.* from Canon Body. I think I mentioned the archdeacon's own contribution of 500*l.*, and I myself intend to give 3,000*l.* That sum includes 800*l.* which has been already allocated by promises of my own to different churches which are to be built; therefore there will only be a contribution of 2,200*l.* to the general fund. Thus I think we start under very fair auspices, and with very good hopes. Strangely, I had omitted to mention one sum which was certainly uppermost in my mind; I do not know how it escaped my lips—that is the donation of 1,000*l.* from the Dean and Chapter of Durham. I think you will see from what I have said that the scheme is a very hopeful one. I hope you will take it up one and all, and I trust there will be contributions in all the churches in the dioceses in aid of it. If I receive sufficient encouragement, and if I am directed by the committee, I shall issue a letter to this effect. In this and in other ways—by the formation of local committees, of which you will hear in one of the resolutions—I do trust that the whole sum may be raised.

The British Museum contains two impressions of New Year cards which date from the latter half of the fifteenth century.



## THE VALUE OF A MONASTERY.

ON Friday, the 4th inst., at the West Sussex Quarter Sessions, the magistrates had before them an appeal from the Fathers of the New Carthusian Monastery, at Cowfold, or as it is better known, St. Hugh's, Parkminster, M. Edouard de Gaulejac, the sub-prior, being appellant, and the Assessment Committee of the Cuckfield Union respondents. The case excited considerable interest in the county of Sussex, not only on account of the novelty of rating religious houses in England, but also from the magnitude and unique character of the buildings, which cost about 200,000*l.*, and stand on an area of upwards of nine acres. On the bench, which was presided over by the Hon. J. J. Carnegie, were the Dukes of Norfolk and Richmond, Sir W. Barttelot, and a number of the leading gentry of the county. There was a large attendance of ladies, who manifested considerable interest in the proceedings. The case lasted the whole day, and scientific witnesses were called on both sides. For the appellant were Mr. J. W. Penfold, of Westminster; Mr. Tewson, of the firm of Debenham, Tewson & Co.; and Mr. Charles Hadfield, of Sheffield, the latter gentleman having to speak more especially to the planning and traditions of the Carthusian and other religious houses. For the respondents were Mr. C. J. Shoppee, architect and surveyor to the Grocers' Company; Mr. Ryde, sen., and Mr. Watney, of the firm of Norton, Trist, Watney & Co. Mr. Lumley Smith, Q.C., was leading counsel for the appellant, instructed by Messrs. Arnold & Co., and Mr. Meadows White, Q.C., for the respondents.

After a patient and exhaustive hearing the magistrates decided upon reducing the rate from 1,750*l.* net to 1,275*l.* net, the chairman remarking upon the unique and difficult nature of the inquiry, and complimenting both sides on the skilful way in which the case had been conducted. By this decision costs will follow the issue. The Carthusian Order flourished in England in the pre-Reformation days, having no less than nine houses, notably the Charter House in London, Shene in Surrey, at Coventry, Hull, and one the crumbling remains of which attest to this day the peculiar arrangements required by this community. We allude to Mount Grace, near Northallerton, whose interesting ruins were visited by the Yorkshire Archæological Society in the autumn of 1882. The rule of the Carthusian Order is well known—daily contemplation, prayer, study, and perpetual silence, the monastery being really a collection of detached hermit cells, each with its little garden, and having a communication into the grand vaulted cloisters and court of over three acres, from which the church, chapter-house, library, and various offices of the abbey are approached. Most of these have vaulted stone roofs, and are handsomely fitted up, precisely as the great monastic buildings of the Middle Ages. The monastery of St. Hugh's will well repay a visit from those persons who are interested in the monastic life and economy of the Middle Ages, and we feel sure that a hearty welcome will await the visitor, for the good monks, though practising themselves severe austerity, extend in the guest-house a kindly hospitality to their visitors, while at the great abbey gate-house the poor are fed daily in large numbers.

## AMERICAN PINE.

A REPORT by Consul H. P. Walker on the trade of Charleston, which has been just issued, contains the following account of the long-leaf pine:—This invaluable tree is known both in the countries which produce it and in those to which it is exported by different names; in the first it is called long-leaved pine, yellow pine, pitch pine, and brown pine; in the Northern States, southern pine and red pine; and in England and the West Indies, Georgia pitch pine. I have preferred the first denomination, because this species has longer leaves than any other eastward of the Mississippi, and because the names of yellow pine and pitch pine, which are more commonly employed, serve, even in the Middle States, to designate two species entirely distinct and extensively diffused. The specific epithet *Australis* is more appropriate than that of *Palustris*, which has hitherto been applied to it by botanists, but which suggests an erroneous idea of the situation in which it grows.

The mean stature of the long-leaved pine is 60 or 70 feet, with an uniform diameter of 15 or 18 inches for two-thirds of this height. Some stocks, favoured by local circumstances, attain much larger dimensions, particularly in East Florida. The bark is somewhat furrowed, and the epidermis detaches itself in thin transparent sheets. The leaves are about a foot long, of a beautiful, brilliant green, united to the number of three in the same sheath, and collected in bunches at the extremity of the branches; they are longer and more numerous on the young stocks, which are sometimes cut by the negroes for brooms. The buds are very large, white, fringed, and not resinous.

The long-leaved pine contains but little sap; several trunks 15 inches in diameter at the height of 3 feet, which I have myself measured, had 10 inches of perfect wood. Many stocks of this size are felled for commerce, and none are received for exportation of which the heart is not 10 inches in diameter when squared.

The concentric circles, in a trunk fully developed, are close and at equal distances, and the resinous matter, which is abundant, is more uniformly distributed than in the other species; hence the wood is stronger, more compact, and more durable; it is, besides, fine-grained, and susceptible of a bright polish. These advantages give it a preference over every other pine; but its quality is modified by the nature of the soil in which it grows; in the neighbourhood of the sea, where only a thin layer of mould reposes on the sand, it is more resinous than where the mould is five or six inches thick; the stocks that grow upon the first-mentioned soil are called pitch pine, and the others yellow pine, as if they were distinct species.

This wood subserves a great variety of uses in the Carolinas, Georgia, and the Floridas; four-fifths of the houses are built of it, except the roof, which is covered with shingles of cypress; but in the country the roof is also of pine, and is renewed after fifteen or eighteen years, a considerable interval in a climate so warm and humid.

A vast consumption takes place for the enclosure of cultivated fields. In naval architecture this is the most esteemed of the pines; in the Southern States, the keel, the beams, the side-planks, and the pins by which they are attached to the ribs are of this tree. For the deck, it is preferred to the true yellow pine, and is exported for that purpose to Philadelphia, New York, &c., where it is in request, also, for the flooring of houses.

In certain soils its wood contracts a reddish hue, and it is for that reason known in the dockyards of the Northern States by the name of red pine. Wood of this tint is considered the best, and, in the opinion of some shipwrights, it is more durable on the sides of vessels, and less liable to injury from worms than the oak.

The long-leaved pine is the only species exported from the Southern States to the West Indies. A numerous fleet of small vessels is employed in this traffic, particularly from Wilmington, in North Carolina, and Savannah, in Georgia.

The stuff destined for the colonial market is cut into every form required in the construction of houses and of vessels; what is sent to England is in planks from 15 to 30 feet long and 10 or 12 inches broad; they are called *ranging timbers*, and are sold at 8 or 10 dollars a hundred cubic feet. From the diversified uses of this wood an idea may be formed of the consumption; to which must be added a waste of a more disastrous kind, which it seems impossible to arrest. Since the year 1804 extensive tracts of the finest pines are seen covered only with dead trees.

Professor Kerr, in his "Physiographical Description of North Carolina," refers to the trees of this State as follows:—

"It will be seen from the United States census tables for 1870, that of its 50,000 square miles of territory, 40,000 are still covered with forests: the range and variety of prevalent and characteristic species of growth, being of course proportioned to those of the climate and soil, are very great. There are, in fact, three well-marked and broadly distinguished forest regions, corresponding to and dependent upon the three geographical sub-divisions, Eastern, Middle, and Western. And while the first section is characterised by a growth common in its prominent features to that in the Gulf States, as the long-leaf pine, cypress, &c., the western or mountain section contains many species familiar in the White Mountains, and in New York. Among the most distinctive, abundant, and valuable species are the pines, oaks, hickories, cypress, and juniper.

"Pines are the predominant growth of the eastern section; there are eight species in the State, the most important being the long-leaf (*Pinus australis*), the yellow (*Pinus mitis*), and the white (*Pinus strobus*). The long-leaf pine is found only in the eastern or sea-coast region; the yellow pine abounds throughout the State; the white pine is limited to the higher mountain regions.

"The long-leaf pine is the predominant growth of the eastern section of the State, and occupies almost exclusively a broad belt quite across the State, and extending from near the coast more than a hundred miles into the interior, covering a territory of near 15,000 square miles. This is one of the most valuable of all trees, on account of the number and importance of the uses it subserves. It is shipped in the form of lumber for civil and naval architecture to all parts of the world, and is unequalled for these purposes on account of its strength and durability. It furnishes the naval stores of commerce, known in all parts of the world; the forests of this State furnishing twice as much as all the other States together. From the rosin of this tree is made the rosin-oil of commerce, and this substance also supplies the southern towns with gas.

"The yellow pine furnishes an important building timber in all parts of the State.

"The white pine is confined to the spurs and plateaus of the mountain and Piedmont regions, being found in great abundance in some counties, and of great size, 3 feet and more in diameter, and 100 to 150 feet high.

"The other species are less widely distributed and less valuable, except the *Pinus taeda*, which, in the Eastern section, sometimes attains a great size, and furnishes an excellent building and ship timber."

Messrs. Wallis & Strang have obtained the order to execute the stained glass windows for the cathedral of Kingston, Canada. There are over one hundred lancet windows.



## NOTES AND COMMENTS.

THE fall of the bridge over the railway near Coppull Station on Sunday, causing the death of several workmen who were about to remove it, should be taken as a warning by overseers and workmen. The North Union Railway, between Preston and Wigan, to which the bridge belonged, was opened for traffic in October 1838. It was laid out by Mr. VIGNOLES, and was the first example of a comparatively cheap line. The cost per mile was about 23,000*l.*, but the gradients were stiffer than on other early railways. The bridges over the railway were made 30 feet in span and 16½ feet in clear height, and they were generally built of stone, with brick arches, but the bridge that fell is said to have been built entirely of brick. It was found when the line was being made that the strata were disposed to slip, and in parts it was necessary to drive piles to protect the banks. This tendency was at Coppull increased by mining operations, and it was evident that the elliptical arch (which was formed of three rings of brick) was becoming flatter owing to the sinking of the abutments. According to the Eastern proverb, an arch never sleeps; but in this country workmen apparently believe that every arch, under all conditions, is as enduring as a pyramid. There was no precaution taken at Coppull to provide against an accident, and although the abutments were insecure and were likely to press inwards, it was ordered that the rings of bricks were to be removed without any care for the consequences. The fall of the bridge is another instance of the folly of trusting to empirical knowledge.

WE lately referred to the dispute between the Stratford-on-Avon Town Council and the Shakesperian scholar, Dr. HALLIWELL PHILLIPS. It is satisfactory to find that the Council have at length discovered the absurdity of their suspicions, and that they have come to a resolution which is tantamount to an apology. It states that the Corporation, "fully sensible of the interest taken in their ancient records by Dr. HALLIWELL PHILLIPS, and gratefully acknowledging the important services rendered by him at various times in regard to them, desires to express its regret that he has thought it necessary to abandon the work entered upon in autotyping the records of a special interest, and the Corporation desires to say that the confidence it has always placed in Dr. HALLIWELL PHILLIPS has never been withdrawn, and trusts that arrangements may be made by the newly-appointed record committee which will enable him to resume his valuable services to the Corporation." Whether Dr. HALLIWELL PHILLIPS will renew labours which entailed great expense to him remains to be seen.

THE Act by which the trustees of the National Gallery are enabled to part with some of the pictures belonging to the collection, and which have been purchased or bequeathed, has been put in force. Four modern works have been sent to the National Gallery in Dublin. The first is *A Dialogue at Waterloo*, by Sir EDWIN LANDSEER, in which the old Duke is seen explaining the battle-field to his daughter-in-law, the Marchioness of DOURO. It was one of the most popular pictures at South Kensington before the removal of the VERNON Collection to Trafalgar Square. The second picture, *A Peep o' Day Boy's Cabin*, by Sir DAVID WILKIE, will be better appreciated in Dublin than in London, and may serve as a warning there. The third is the small, but very rich picture, *The Duet*, painted by WILLIAM ETTY in 1838; and the fourth is one of MULREADY's best works, *The Young Brother*. The removal of the last was not contemplated when the Act was passed.

MR. KIRKALDY, of the Southwark Testing and Experiment Works, lately received an order to supply the Technological and Industrial Museum of New South Wales, Sydney, with a collection of specimens illustrative of the mechanical properties of various kinds and qualities of the materials used in construction. The collection is now completed, and consists of three hundred and thirty specimens representing various qualities of steel and iron, from the hardest to the softest manufactured, in the form of wires, bars, sheets, plates, angles, tees, channels, rails, tyres, axles, shaftings, and forgings, tested under pulling stress. Cards accompanying each specimen give the elastic and ultimate stress in pounds per square inch, contraction of area at fracture, extension at 40, 50, 60, 80, or 100,000 lbs. per

square inch, and the ultimate extension. The collection also contains specimens of steel and iron, tested under thrusting, bending, twisting, shearing, and bulging stresses; specimens of copper, copper alloys, steel and iron castings, granite, marble, stones, cement, wood, chains, hemp, manilla and wire ropes, rivetted joints, welded joints, cards with the results of the tests accompanying each specimen. Two somewhat similar collections were supplied to the Imperial Colleges of Engineering, Japan. The samples are now on view, and with those to be seen in Mr. KIRKALDY's Museum of Fractures, are well worth a visit from everyone who takes an interest in the strength of materials.

THE Bewick Club will hold an art exhibition in Newcastle-on-Tyne on the 18th inst. An art union has been established in connection with the exhibition, under the sanction of the Board of Trade, and its objects are, by distributing works of art by means of a lottery amongst the members of the association, to aid in extending the due appreciation of the fine arts among all classes, to offer to artists encouragement beyond that afforded by the patronage of individuals, and to promote the success of fine art exhibitions to be held annually in Newcastle. The price of the Art Union tickets is 10*s.* 6*d.*, and the whole of the money will be given in prizes, excepting the smallest possible outlay for management. Winners will choose their own prizes at the Newcastle exhibition. The management of the exhibition has been undertaken by the Bewick Club, not with the intention of making it a means of displaying the works of the members only, but with the object of making it a general exhibition, open to all artists, for the benefit of the public. The local artists and members of the club will, in regard to the pictures exhibited, be placed on precisely the same footing as other artists who have been asked to send works.

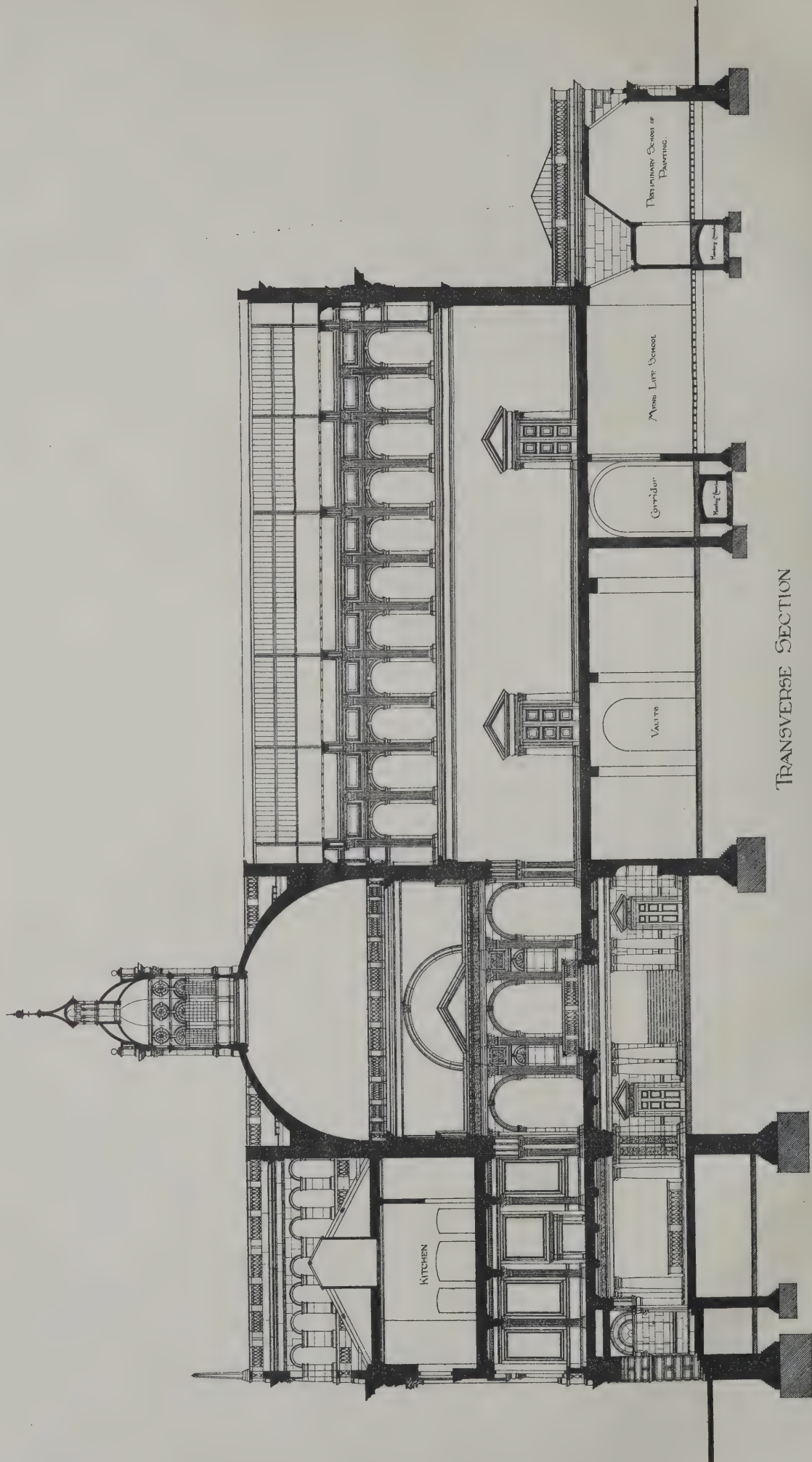
THE Corporation of Aberdeen have been fortunate in obtaining the matrices of the old seal of the city, which bears the date A.D. 1430. In Mr. HENRY LAING's book on "Ancient Scottish Seals," it was said that the matrices had been picked up among a heap of old metal in a broker's shop, and were in possession of a Mr. SMITH. Inquiry was made, and they were discovered, and fortunately in an excellent state of preservation. The possessors, on being informed of the nature of the object, at once presented the seal to the Corporation.

DREDGING operations have been carried on in the Thames between Boulter's and Hambleden Locks for some months past, and have resulted in many very interesting antiquarian discoveries. They include a bronze sword and several flint hatchets, some chipped and others polished. A Franciscan (iron) axe and a greenstone axe were found in the river at Taplow Mills, also an iron axe (carpenter's) of about the fifteenth century. On the north side of the main road to London, between Taplow Station and the One Mile House, on the rising ground called Windmill Field, there has been from time to time unearthed much of great archæological interest, and, in what appear to be pit dwellings, about 3 feet deep and 15 feet in diameter, are found earthen cups of the rudest description, both in make and material. In one of these depressions was found a flint chip, polished on one side, which may be accounted for as being a chip pitched off from a broken hatchet in the re-cutting. A large cinerary urn containing Roman remains was found buried on the outside, or a few feet from what appears to have been a double line of defence; at about 25 feet apart, there are ditches about 2 feet 6 inches deep, and on the top of the bank thrown up would probably be fixed the stockade. From frequent observation and existing indications it may reasonably be supposed that this terrace level continuing on to Bury Hill was an old occupation site, skirting the then dense forest behind, and immediately in front would have been the sloping bank of the then wide river, extending to the Berkshire Hills, some six miles distant. In October 1837, during the progress of the works on the line of the Great Western Railway, on this same terrace two very rude urns of unbaked pottery were found, about two feet below the surface, the smaller 3½ inches high, and the same in diameter, containing a number (not exactly ascertained, but said to be from 400 to 500) of Roman silver coins. They are supposed to have been buried in the reign of AURELIUS, or early in that of COMMODUS.









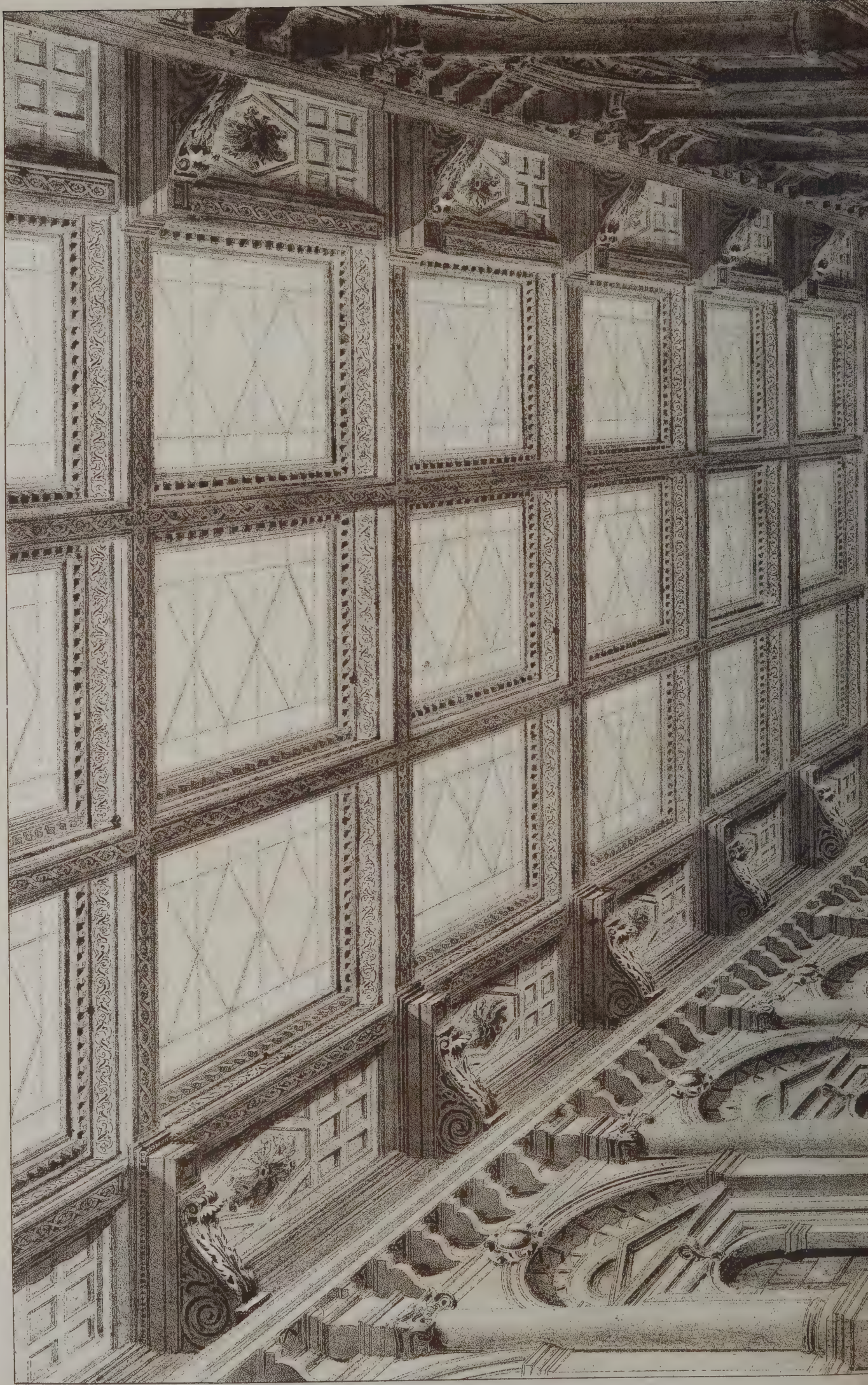
TRANSVERSE SECTION

DESIGN FOR AN ACADEMY OF ARTS.  
AWARDED ROYAL ACADEMY GOLD MEDAL & TRAVELLING STUDENTSHIP.  
By EDWIN GEORGE HARDY.













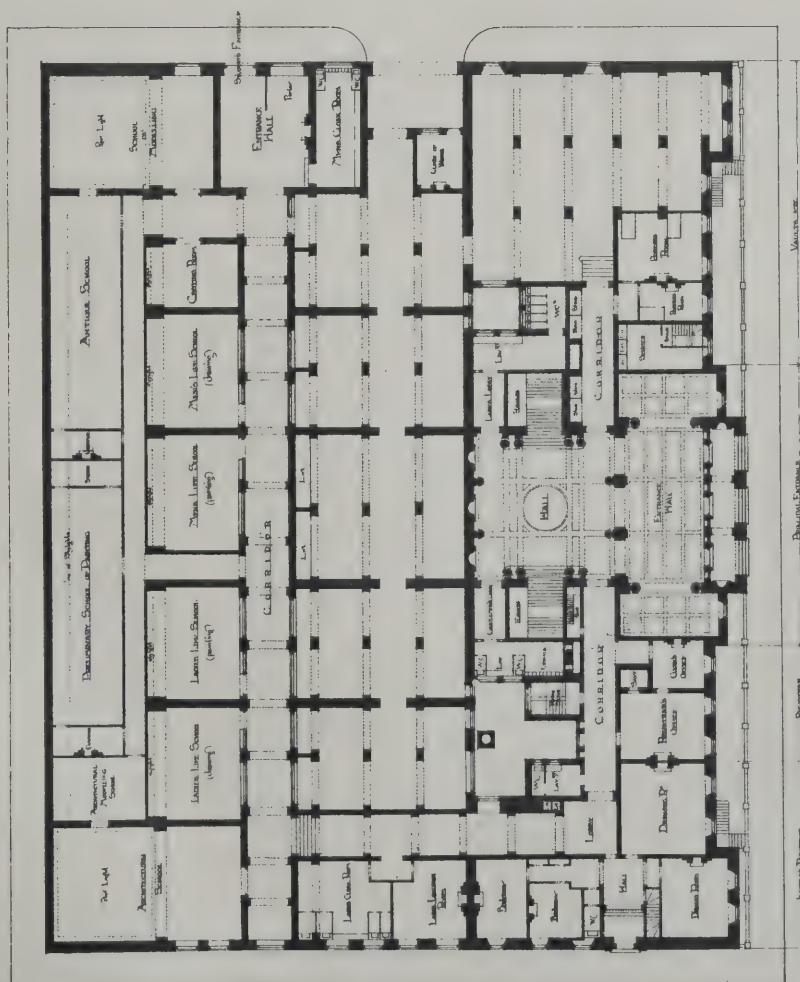
DESIGN FOR ROOF OVER QUADRANGLE, ROYAL EXCHANGE.

By MESSRS MEDLAND & POWELL

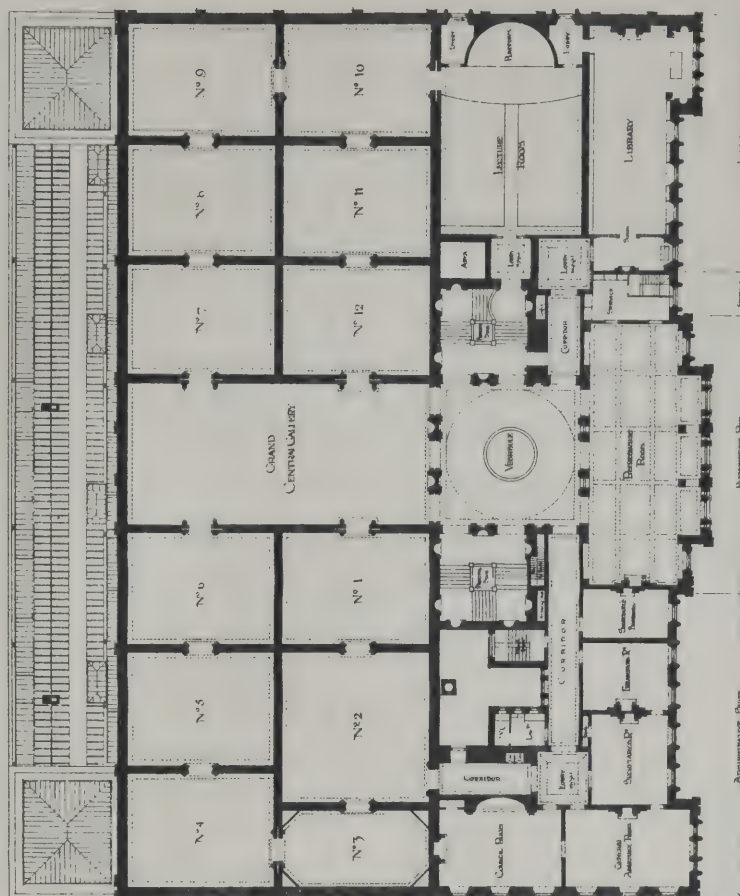








### PLAN OF GROUND FLOOR



### PLAN OF PRINCIPAL FLOOR

DESIGN FOR AN ACADEMY OF ARTS.  
AWARDED ROYAL ACADEMY GOLD MEDAL & TRAVELLING STUDENTSHIP.  
By EDWIN GEORGE HARDY.

Sprague & Co. 22, Martins Lane, Cannon St EC







## ILLUSTRATIONS.

DESIGN FOR ROOFING QUADRANGLE, ROYAL EXCHANGE.

THE design for roofing the interior court of the Royal Exchange, by Mr. CHARLES E. POWELL, of the firm of Messrs. MEDLAND & POWELL, 89 Chancery Lane, was one of those submitted to the Honourable the Gresham Committee in the autumn of last year, and was one of the three selected by the surveyor to the Committee. It was designed so as to harmonise with the existing building, to interfere as little as possible with the lights of the rooms looking into the court, and to allow of easy access to the glass for cleaning and repairs, which latter advantage was secured by each of the cross-beams being planned to carry wide gutters forming footways, light glass and iron roofs, covering the inner glass ceiling, running between them from side to side. The iron-work was planned to be cased with ornamental wooden mouldings and brackets, covering the arched form of the girders, the arrangement of which, each following the line of the existing columns below, is shown in our illustration.

DESIGN FOR AN ACADEMY OF ARTS.

WE publish reproductions of the drawings by Mr. E. G. HARDY, which gained the Gold Medal and Travelling Studentship of the Royal Academy. It was anticipated that the competition was to be well contested, and the designs submitted were exceptionally good. Mr. HARDY's success is therefore the more creditable to him. It will be seen that in the design there is no trace of the style that happens to be in vogue. Mr. HARDY has employed a style that is better deserving of approval, and his treatment of it shows how well he has mastered the principles of the great Italians.

## THE ARCHITECTURAL ASSOCIATION.

THE fourth ordinary meeting of the Association was held on Friday evening, the 4th inst., Mr. Cole A. Adams, president, in the chair. The following gentlemen were elected members:—Messrs. F. A. Cox, J. H. Roadhouse, T. B. Simpson, C. H. Wainwright, W. Shoebridge, W. E. Hill, G. Nelson, J. B. Thorp, W. Hall, S. E. Coles, M. J. Grummond, F. M. Thin, A. J. Phillips, H. B. Measures, C. Loveband, A. Migotti, F. T. Verity, W. R. Wilson, J. R. Morgan, E. L. Conder, T. E. Key, C. G. Baker, W. C. Carlile, J. T. Perkin, E. T. Gover, and H. H. Moses.

Mr. J. A. REEVE then read a paper, of which the following is a condensed report:—

## Fountains Abbey.

On making a careful comparison of many Cistercian abbeys we find that the general disposition of all the main buildings, namely, those surrounding the cloister court, is almost identical in every case, so much so in fact that it is possible, as the late Mr. Sharpe has shown, to give a typical ground plan which shall be a fairly true representation of the Cistercian abbeys built before the year 1200. This early arrangement of the buildings is still almost perfect at Fountains, the only alteration made being in the choir of the church, which, during the first half of the thirteenth century, was reconstructed on a grand scale. During excavations made about thirty years ago, the foundations of the original choir were found, which show that when first built Fountains was no exception to the rule then general throughout the Cistercian Order. The cloister court forms almost a perfect square in the centre, and round this are placed, most conveniently, the various buildings in the following order:—The whole of the north side is occupied by part of the nave of the church, which also extends westwards beyond the domus conversorum. The east wall is formed by the west wall of the south transept, the chapter-house, and a small portion of the frater. On this side also we find a sacristy between the church and the chapter-house, and a passage between the latter and the frater. These are generally to be found always more or less nearly in these respective positions. On the south side are the kitchen, refectory, and buttery, and at the eastern end between the frater and kitchen is placed the staircase leading to the monks' dormitory, scriptorium, &c., on the first floor. The west wall of the cloister is flanked by the northern part of the great building destined for the use of the conversi, or lower order of monks, who, like their superiors, had a day-room on the ground-floor as large as the dormitory above. Of these several buildings the church and the chapter-house run east and west, and the frater, refectory, and domus conversorum run north and south.

The original church at Fountains before it was altered was a good type of the earliest form of Cistercian churches, describing on plan the shape of a true Latin cross. The nave was long, and the chancel, north and south arms of the transept, all short and of about equal lengths. The nave had aisles which opened into the transept, but these aisles were not extended to the choir. The

transept, however, is provided with chapels projecting from its eastern wall that flank the choir for about half its length but do not communicate with it. The choir itself and all the transeptal chapels are square-ended, as at the mother abbey of Cîteaux. It was the almost universal practice of English mediæval architects to adopt the square east end; but that it should have been used at Cîteaux and other early Cistercian churches in France, is, I think, exceedingly interesting. It was a marked departure from precedent when the monks of Cîteaux built their church with a square end, and one cannot help recollecting that the prime mover of the reform was an Englishman, who, it may have been, retained a predilection for the square-ended churches of his mother-country, and induced his followers to adopt this sterner form. I am much inclined to believe that the square-ended church was to the Frenchmen of that day a definite external sign of the severe life of self-abnegation they were desirous of leading.

The rules that bore on the construction and decoration of Cistercian churches were then read by Mr. Reeve, and among them two relating to towers and bells, viz., "Let not stone towers for bells be built, nor wooden ones of immoderate height, for they detract from the simplicity of the Order," and "Let the bells of our Order be so managed that one only shall be struck at a time, never two together." I believe, Mr. Reeve went on to say, many of the French Cistercian churches show signs of having originally possessed wooden bell-turrets; in England, however, even from the earliest times this rule seems to have been neglected, for at Kirkstall, founded in the year 1145, the lower storey of the tower over the crossing is of the same date as the rest of the church, and at Fountains there are evident signs of the same sort of low twelfth century stone tower having once existed.

The choir of an early Cistercian church is always short, but in the thirteenth century, a little more than one hundred years after the foundation of the Order, they got tired of this restriction, and in England as well as in other countries we then find Cistercian choirs of considerable proportions. Looking at the plan of Fountains, for example, it will be seen that the area of the choir, as reconstructed during the first twenty-five years of the thirteenth century, with its eastern transept called the Chapel of the Seven Altars, amounts almost to the area of the nave and transept. This late choir is also provided with north and south aisles, one of the original transeptal chapels on each side having been destroyed to admit of this. In some ways the extension of the choir must be looked upon as an improvement, but anyone who has seen the original twelfth-century choir at Kirkstall must have been impressed with its solemn grandeur, which seems to harmonise better with the rest of the abbey than does the extensive choir of Fountains. Among the sketches hung on the walls is one showing my idea of the exterior of the original choir of Fountains Abbey, with the central tower and north transept. A second sketch shows the interior of the existing choir restored.

The exterior of the nave consists merely of a row of semicircular clerestory windows above, and a row of similar aisle windows below, divided from one another by the rather shallow aisle roof. Pilasters of slight projection divide clerestory and aisle into bays. The interior of the nave is not less severe than the exterior; the nave arches moulded in the simplest manner possible are supported on plain cylindrical columns with shallow capitals and bases, and between the arcade and the clerestory there is merely a piece of blank wall surmounted by a plain bull-nosed string course, upon which the jambs of the inner arches of the clerestory windows rest. Everyone must recognise it as first-rate architecture, notwithstanding its almost childish simplicity. It seems probable that the nave and transept were covered by means of semicircular wooden ceilings, but the original choir was probably vaulted in stone as at Kirkstall. The nave aisles had stone roofs of a peculiar character: transverse semicircular arches springing from corbels inserted about two-thirds up the nave piers, and at a similar height on the aisle walls, supported transverse pointed barrel-vaults which followed the line of the main nave arches. It was, in fact, little more than a prolongation of the nave arch to the aisle wall.

In addition to the extreme simplicity of form in the plan and elevations of the church, we find that the interior decoration of the building was equally simple. At Fountains Abbey, notwithstanding more than three hundred years of exposure to the inclemency of a Yorkshire climate, much of the mural decoration of the church still exists. It is of the plainest description, merely red joint lines on a white ground. With these red lines the whole surface of walls, piers, and arches seem to have been covered. Some of this jointing belongs evidently to the twelfth century, while some of it must have been done quite three hundred years later, showing that the ancient rule of simplicity in the matter of painting did exercise considerable repression even to the last days of the Order. In the whole abbey I only discovered the remains of one small fresco. It is on one of the piers on the south side of the nave, and probably formed part of an altar-piece. It appears to have been executed in monochrome.

At the west end of Cistercian churches there is often found a portico or narthex extending along the whole length of the western façade. Its primary use is doubtful, but it was used at Fountains, and I do not doubt elsewhere also, as a place of sepulture—I should



think very likely for noble personages of the laity wishing to be buried near the church, within which the strict laws of the Order would not admit them. The Cistercians were amongst the first to make use of the pointed arch, and it is particularly worthy of note that they used it first, not for the more decorated features, such as windows, doors, and arcadings, but without exception for the main arches of construction, such as the arches of the nave arcade, the great arches at the crossing, and for the transverse ribs of vaulting. This seems to me to be a conclusive argument against the theory that the pointed arch was discovered by the chance intersection of two semicircular arches in Norman arcading. I believe, on the contrary, that it was adopted on constructional motives, from the recognition of the fact that a semicircular arch without a keystone is inclined to be weak, while with a keystone it necessitates a different mode of treatment from what our eleventh and twelfth-century ancestors were willing to adopt.

On leaving the church by the cloister door, and walking south, we first come to what now looks like a vaulted passage. It was originally divided into two separate apartments, of which the eastern one was the sacristy, with a private entrance into the south transept of the church, and the western one seems likely to have been a cell, which, in after years, came to be used as a charnel-house. Next comes the chapter-house, which, like most chapter-houses of the Order, is a long parallelogram divided into three aisles by two rows of pillars running east and west—an elaborate piece of architecture; it was vaulted throughout with rich stone vaulting, supported on corbels against the walls and the columns before named. The latter, with their caps and bases, were of polished marble. The chapter-house was entered by three great archways leading directly into it from the cloister; and as the archways never had doors, and the cloister was not glazed, the chapter-house was virtually open to the outer air. The memorial slabs of several abbots remain, and the bases of three tiers of stone seats running round the walls. As these are interrupted at the east end of the centre aisle, I am inclined to think that the abbot's chair stood in this position, and was of wood. Next to the chapter-house is a richly-vaulted passage leading directly to the abbot's house and various other buildings to the south-east of the central block. Then follows the frater—a low and dismal building running north and south. The northernmost bay overlaps the cloister, and was divided off from the rest of the apartment. It had a doorway at each end, one communicating with the cloister court, and the other with the base court. The part thus cut off from the monks' day-room may have been a locutorium. The wall which originally separated it from the frater is now demolished, but it is plain it once existed. Here it was evidently an after-thought; but it generally forms one of the separate rooms in a Cistercian abbey. The frater itself is a low-vaulted room, divided into two aisles by a central row of columns. It was lighted by two windows at the south end; there was no other natural light, but possibly lamps were kept burning at the north end. Above this day-room was the dormitory, reached by stairs still existing between the frater and the kitchen. A passage led direct from it into the south transept of the church. The scriptorium, also reached from this passage, was over the four eastern bays of the chapter-house; only three outer walls remain of it. The height of the roof of all these buildings is given by the line cut in the face of the south transept to receive the flashing. Though the chapter-house and frater were only two or three years later in date than the nave and transept, and must have formed part of the original design, the roof-line was allowed to cut in the most careless manner across the windows of the transept.

On the south side of the cloister court the kitchen comes first, a fine lofty room, oblong, vaulted, and divided into two bays each way, with a massive pier supporting the ribs in the centre. In the eastern wall are two fireplaces, the openings occupying the whole width of one bay each. They are more than 16 feet wide by 6 feet 6 inches high, and are square-headed, the lintels formed by flat arches of joggled stones, 4 feet 9 inches deep. The kitchen was lighted by two large windows in the south wall, in which was also a door giving access to buildings between the frater and the refectory, probably sculleries, fuel-houses, &c. In the west wall are two openings, cut after the completion of the buildings to form hatchways into the refectory. In the north wall there is only the doorway leading into the cloister court.

In the centre of the south wall of the cloister stands the noblest of all the conventual buildings, the refectory, 109 feet long by 46 feet wide, and divided into two aisles by a central row of marble columns. Unlike all the other buildings in the abbey, this room was not vaulted, but seems to have had two parallel wooden ceilings, arched in form and lofty. The seats were of stone, arranged round the east, south, and west walls, and the tables had stone uprights. The pulpit is clearly traceable on the west side, the doorway and flight of stairs leading to it in the thickness of the wall are perfect, and inside the doorway is the locker in which the books were kept. At the north end of the west wall is a doorway with curved sides leading into the buttery, and suggesting that here stood a turn-table, from which each monk took his rations as he entered the refectory. There are remains of the lavatory along the south wall of the cloister on each side of the refectory doorway. Its form is that of a long trough. One-half of the whole

length still remains, and it is evident by the deposit of lime adhering to it that it was always kept full of water. The holes for serving-pipes and waste-pipes still exist. A ledge runs along behind the trough, upon which probably brass reservoirs with taps were placed, for our forefathers washed their hands over a basin rather than in it.

The design of the domus conversorum follows very much the lines of the frater, being a long, low, vaulted day-room, with dormitory above, but much larger than the frater, being no less than 300 feet long by 41 feet wide, and originally divided probably into two parts at least. The southern end has evidently from the number and size of its windows been used as a workshop, while the northern end was a kind of lobby in which those who went out to work in the fields, stables, &c., mustered. It has been thought that the eastern aisle of this northern part was used as a store-room, though more probably the whole of the space would have been wanted for the conversi in winter evenings after work was over. There are four large doorways in the western wall of this part, and two small ones evidently to allow the conversi to get rapidly out of the house on leaving the church after early service. At the north end of the western aisle there is a large door leading directly into the south aisle of the church. On the western side, and about the centre, is a little room with a fireplace, over which are steps leading to the dormitory. This room, no doubt, was inhabited by the magister conversorum. The dormitory, as large as the day-room below, was lighted by narrow round-headed windows throughout its length on each side; a flight of steps at the northern end leads down to the south aisle of the church. The dormitory was not vaulted; there were therefore no columns down the centre. Mr. Reeve concluded his paper with a reference to the other buildings connected with the abbey, the more important being the abbot's house, the hospitium, infirmary, gate-house, mill, &c.

Mr. F. T. BAGGALLAY proposed a vote of thanks to Mr. Reeve. The paper, he observed, had been mainly archaeological, and hardly afforded matter for argument, as would have been the case had the question of possible restoration been treated of. Mr. Reeve had spoken of the influence that the life led by the monks had exercised on their buildings. This fact was not a little calculated to cause despondency with regard to the present prospect of architecture, because our present life and tastes were so different from the pure tastes and severe lives of those monks that we could never produce naturally such simple work as they did. The luxury of the day tended also to luxury in building. The failure of the Gothic revival was due to the fact that the nineteenth century was luxurious to a most unprecedented degree, so that the buildings of the thirteenth century could not be accommodated to the wants of our present life.

Mr. MILLARD seconded the vote, and said it might not generally be known that Mr. Reeve had measured the whole of the buildings, down to the stone joints, with the object of preserving an exact record of them in their existing state.

Mr. A. B. PITE, Mr. W. H. PRATT, and Mr. STOKES supported the vote, which, on being put to the meeting by the President, was unanimously carried.

Mr. REEVE, in acknowledging the compliment, said that the owner of the abbey, Lord Ripon, had wished that the drawings, &c., of the abbey should be made as accurately as possible. Time and money for the purpose had not been stinted.

## THE SHREWSBURY SHIREHALL.

AT the last Shropshire Quarter Sessions, the Shirehall and A Judges' House Committee stated that they were glad to lay before the Court the following very satisfactory report of Mr. Thomas M. Lockwood, the architect, relative to the progress and final completion of the building:—

"I beg leave to report upon the condition of the works now being carried out at the new Shirehall Buildings under my direction. The whole of the works may now be considered complete, with the exception of the painting and decorating, which have been somewhat retarded owing to the time of year and the difficulty attending the completion of such works before the walls of the buildings are perfectly dry. Mr. Warburton, the contractor for the main building, has completed the whole of his work with the exception of the new doors and screen in the front hall, and has done his work in a sound, substantial, and satisfactory manner. The whole of the furniture is also completed and delivered to the building, and this work also reflects credit upon the contractors, Messrs. W. & F. Brown & Co., of Chester, and Messrs. White & Co., of Shrewsbury."

The Chairman said he was sure the Court would receive with satisfaction the report relative to the completion of the works in the new Shirehall. The whole of the work reflected very high credit not only upon those who had been actually engaged upon it, but also upon the architect, Mr. Lockwood, who had designed the Courts and superintended the works. The payments for the Shirehall had not been so large as they expected at the October Sessions, when it was estimated that 4,000*l.* would have to be paid during



the quarter. But that had not been the case, and so it had only been necessary to borrow 2,000*l.* The total amount at present raised on behalf of the Shirehall was therefore 18,100*l.* Mr. Lockwood thought that during the next quarter they would be able to clear everything up, so that the committee hoped to be able to present the whole of the accounts, properly made up, at the Easter Sessions; and they had heard that the sum of 3,000*l.* would probably be sufficient, including the balance they had in hand.

### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE ninth annual report of the Birmingham Architectural Association states that during the past session there has been a considerable increase of both ordinary and honorary members, and that the session was the most successful the Association has enjoyed since its inauguration. But the committee wish at the same time to urge upon the members the necessity for continued and increased individual effort, so that the true object of the Association may be attained and the profession generally benefited thereby. The ordinary meetings held during the session were more largely attended than at previous sessions. Papers were read on the following subjects, viz.:—"Hearts in our Art," by Mr. Norman Gething; "Surveying," by Mr. H. Clere; "Home, Sweet Home," by Mr. W. Henman; "Some Errors in Construction," by Mr. J. M. Gething; "Architectural Revivals," by Mr. J. W. Tonks; "Sculpture: What it was, What it is, and What it will be," by Mr. J. Roddis; "Notes on Sketching Tour from Belgium to Heidelberg," by Mr. A. Reading.

Archæological and sketching excursions were made during the session to Knowle, Packwood, Hagley, and Clent. The classes were more numerously attended, but the committee would impress upon the younger members the benefit to be derived from contributing papers and preparing designs. The designs contributed were fairly satisfactory. The construction class papers received were few in number, but each set of questions was discussed with great interest.

The programme for the session 1883-4 contains several interesting papers, and the committee wish to draw the especial attention of members to the essay prizes offered this session by the President and Mr. C. A. Harrison respectively.

### THE ADORNMENT OF SCHOOLS.

A PAPER on "The Interior of the Schoolroom: Fittings, Apparatus, and Æsthetic Adornment," by Mr. J. Matthew, was read at the congress of the Educational Institute of Scotland. The author said that the dealing with financial questions might obtain for School Boards more popularity among a certain class of ratepayers, but in attempting to improve the health, comfort, and happiness of the teachers and the pupils they would reap a far richer reward, and would leave behind them a grateful remembrance which time could not efface. It was a great mistake to lay the floors with white wood; it might be cheaper at first, but, like other cheap things, it was discovered to be the dearest in the long run. These, as well as the desks, should be made of the best pitch pine. School Boards would confer a real benefit upon the children by erecting a large lobby or entrance-hall in connection with their schools, with a fireplace or stove. Here, in the winter time, the pupils might take off their boots and have them dried before starting on their homeward journey—the pupils being encouraged to bring slippers with them to school. Mr. Matthew advocated the establishment of school libraries for the use of the advanced pupils. In this connection he also expressed the hope that ere long every child almost, on reaching the age of five years, would be found in the infant rooms. A child lost a very valuable portion of his education who lost his infant training. Seven years was certainly a very tender age to present children in any standard, and it might be that the Department might relax this rule and fix the eighth year instead. This would ease much of the burden that was now causing such mischief and dissatisfaction. On the question of the æsthetic adornment of schools, he said the grand aim of all earnest teachers was to make the school life of the pupil a healthy, cheerful, and active one, and this was to be accomplished by making the surroundings agreeable. Here much depended on the individual exertions of the teacher himself. If he were a man of taste he would make his influence felt in this direction, because he could not be happy if the elements of discord existed to mar the harmony of his own life. By a judicious arrangement of the materials at his disposal, such as maps and illustrations, he might cause his rooms to assume a bright and inviting appearance. In summer they all had command of gardens or wild flowers, and what could be sweeter in a room than a flower-glass filled with these beautiful children of nature? If the teacher once began to decorate, many willing hands would gladly assist. An engraving from one, a few plants or flowers from another, would brighten the interior of many a school, which

might thus become a centre to radiate gentle influences into many a home.

Miss Blyth spoke of the desirability of school managers being consulted by architects as to interior arrangement of school buildings when preparing plans.

Dr. Morrison, in moving a vote of thanks to Mr. Matthew for his paper, said this subject was attracting more and more attention every day. A great deal was said about the brutality of people in the large towns; but by following the suggestions of Mr. Matthew a great deal might be done to train children to observe those little courtesies which one child should pay to another, to the improvement of the moral part of their nature. On the whole, they had reason to be thankful for the progress that had been made in the main direction of Mr. Matthew's remarks, and if School Boards had done nothing more than build and equip schools in the way they had done, the country had reason to be grateful to them.

### THE DWELLINGS OF THE POOR.

A PAPER on the subject of dwellings for the poor was read by Dr. H. Page at the meeting of the Birmingham and Midland Officers of Health. It was said that the problem was certainly a complex one. The President of the Local Government Board said, "the wretched condition of the dwellings of the poor is only one incident in the general condition of a large part of the population; poverty, ignorance, and crime are other factors." Consequently the remedies must be manifold; there must be a more stringent application of the existing sanitary legislation, supplemented by some further legislation, as well as philanthropic and Christian efforts, and general and sanitary legislation. The remedy was beyond private enterprise alone, emigration, or even State aid, as some would wish to believe. Fresh legislation had been looked upon by some as the favourite specific of the shallow reformers who had neither time nor patience to examine whether an adequate and sustained exercise of existing powers might not prove sufficient. But the present legislation had already proved inefficient, inasmuch as it had allowed the present condition of things to continue and increase. Most of the chief sanitary laws contained flaws which form playgrounds for almost endless and expensive legal tournaments. It could not but be recognised that all kinds and degrees of insanitary conditions of dwellings existed in the small towns and country places, as well as in the cities and large centres of population; yet in the former, owing to the influence of vested interests on the sanitary authorities, and the absence of any really organised sanitary supervision, the condition of things remained unchanged. Special legislation was wanted to deal efficiently with existing dilapidated property, and building by-laws should be extended to the entire country, and some reasonable means of enforcing penalties on the local authorities for omissions of statutory sanitary duties should be brought into use. Again, legislation was required to remedy the present method of setting in operation such Acts as the Artisans' Dwellings Act of 1868, and to abolish the absurdity, under the Artisans and Labourers' Dwelling and Improvement Act of 1875, of the rates having to provide fancy values for death-dealing properties. The principle of enforced remedy by the sanitary authority, with the option of purchasing from the owner at a fair price, should be extended to all urban sanitary districts. If Sir Charles Dilke intended, as he announced he did at Birmingham, to utilise the provisions of the old Sanitary Act of 1866, its application should be made universal and compulsory. Volumes existed on the legal rights of property, which were rigorously enforced, but they wanted a few legal compilations on the duties of property, with a workable scale of penalties for omission of the same. A dwelling on being let ought to be statutorily assumed to be in good sanitary condition, healthy, and not to contain any disease or death-dealing contrivances. Sanitary authorities, in any future house legislation, should be compelled to keep a register of the plans and exact sanitary conditions of all dwellings within their district, available for inspection to any intending resident. No dwelling should be allowed to change hands or be relet unless inspected and certified by the sanitary authority. For this a small fee or scale of fees might be chargeable, and the applicant should be able to readily enforce statutory penalties on the sanitary authority for proof of statutory sanitary defects or omissions. In the case of tenement houses, or those frequently changing residents, quarterly inspection and certification should be required. They had to consider whether, when once a legal decision was given on any point, it should not be codified by the central sanitary authority, communicated officially to all sanitary authorities, and an appeal to such to be held to be conclusive, and to stop any further litigation on the same question in any place in all courts of law. Undoubtedly fresh legislation on the subject of insanitary dwellings should not be spasmodic, but should, as Lord Salisbury put it, proceed with caution. But at the same time it would have to be stringent, effective, universal, and in a sense undoubtedly confiscatory, since a fair deduction even upon the property's intrinsic value ought in justice to be made on account of the cost already entailed on the community by preventible sickness, disease, and death caused



thereby. Seeing that whatever legislative course was adopted, the sanitary inspectors, and particularly the medical officers of health, would play an important part in the matter, it became a question to consider whether it would not be wiser, whilst striking at the root of the insanitary dwellings evil, to go also to the root of the failure of the existing sanitary organisation, and in one non-piecemeal act of legislation—including the principles of Mr. Chamberlain's recommendations—give a comprehensive and workable Public Health Act.

### THE GREENOCK MUNICIPAL BUILDINGS.

IT was reported at the last meeting of the Greenock Town Council that fifty-eight tenders had been received for the works on the third section of the new municipal buildings, which were remitted to the measurer for report. The Municipal Buildings Committee expressed dissatisfaction with the dilatory way in which the various works in connection with sections 1 and 2 are being proceeded with, and agreed to desire the architects to furnish a report on the progress of the work each fortnight in place of monthly as at present. The Provost, in moving the adoption of the minutes, said the estimates for No. 3 section (a continuation from Hamilton Street to Dalrymple Street) were about 27,000*l.*, being 3,000*l.* under the architects' estimate. He considered this was a favourable time for entering into contracts, but before deciding he thought it was proper that a statement of the probable cost of the buildings should now be laid before the council. The original estimated cost of the entire buildings submitted by the architects, and confirmed by Mr. Barry, architect, London, was 80,000*l.*, with 58,000*l.* for the ground, making a total of 138,000*l.* Including the estimate for section 3, the amount to be expended would now amount to 169,000*l.*, and adding interest capitalised and other charges, the total estimated cost of the buildings would not be less than 180,000*l.* After detailing the various sums, he moved that the committee consider the estimates for section 3, and report to the council whether they consider that section should now be proceeded with.

After a discussion, in which some of the members complained of the great delay which had taken place in completing the other two sections, and that the probability was that the shops in the section in Hamilton Street would not be ready at May for occupancy, the Provost's suggestion was unanimously adopted.

### THE ARCHITECTURE OF A BONE.

A LECTURE was delivered last week at the London Institution on "How a Bone is Built," by Mr. Donald M'Alister, of St. John's College, Cambridge. The lecturer explained that he would treat the construction of a bone as a question of architecture or engineering rather than of anatomy. In looking at an ordinary marrow-bone two points would strike one. In the first place, the shank or shaft of the bone was hollow, forming a somewhat thin-walled tube; secondly, the end of the bone next the joint appeared on section to be not hollow but filled with a spongy or "cancellous" meshwork of bony tissue. The tube-form appeared not only in bones but in many other structures characterised by combined lightness and strength—such as the stalks of plants, reeds, bamboos, quills of feathers; and among human constructions in a vast variety of shapes, from tubular bridges to backbones of bicycles or tricycles. What was the common principle underlying all these manifold varieties? Why was it that, weight for weight, a hollow column was so much stronger than a solid one? The lecturer then showed that when an ordinary rectangular cross-beam was slightly deflected by a load, the upper fibres were in a state of compression, while the under fibres were in a state of tension; whereas in the middle of the beam there was a neutral region neither compressed nor stretched. For load-bearing purposes this region might be removed; the beam would thereby be made appreciably lighter but not appreciably weaker. The tube-form of a bone was thus due to the fact that the material was concentrated at those parts which were most under strain and where it was most useful; it was removed from those parts where it added to the weight without adding to the strength. Tables were exhibited from which it appeared that bone in its physical properties resembled steel much more than such a material as cast-iron. Bone, like steel, was almost as strong to resist tearing as to resist crushing. The spongy or cancellous ends of bone were next considered, and by photographs of actual specimens the lecturer showed that the apparently confused and irregular character of the tissue resolved itself on examination into a very beautiful and harmonious regularity. In the construction of such great structures as the Forth Bridge and the large cranes seen at the docks, engineers had found it useful to investigate the lines of the structure along which the pressure or the tension was at a maximum; these lines might be called stress-lines *par excellence*. The material at disposal was most economically arranged when it was concentrated along these lines, leaving empty the mesh-like spaces corresponding to the neutral region of a cross-beam. A skeleton

or lattice framework might thus be built up, having all the strength of a solid structure of the same shape or loading, but with much less expenditure of substance. Such a structure would, moreover, be free from the danger of giving way by "shearing" or "faulting" in the geological sense. In other words, its parts would have no tendency to give way by sliding or slipping over each other; they could only be directly crushed or directly torn asunder. This was, therefore, an ideal mode of building such structures, and it was only because skilled workmanship was more expensive than material that engineers did not oftener put it into practice. In bone building, the lecturer said, there were no such obstacles in the way of perfect construction, and in such a part as the head of the thigh-bone the principle was carried out in ideal perfection. The cancellous network in this bone was a material embodiment of the engineer's ideal lattice-work of true stress-lines, so much so that in the Zürich School of Engineering thin sections of the thigh-bone were placed before the pupils as the best possible illustration of the true principle of construction. In conclusion, the lecturer remarked that when such instances of adaptation as appeared in the eye and hand, and perhaps he might now add the common marrow-bone, were brought before us we were filled with wonder, and some saw in them evidences of what was called direct design. These evidences might nowadays be interpreted in perhaps a worthier and grander sense, but the wonder would remain for all who had eyes to see. At any rate, apart from all theology, and taking only the strict architectural sense of the words, we must agree that a marrow-bone was well and admirably designed.

### STRUCTURAL IRONWORK.

THE report on engineering trades by Messrs. Matheson & Grant gives the following information on the business of the past year in bridges and other structural ironwork:—The output of bridges during the past year has been very great, but the extension of factories and the introduction of labour-saving processes have so increased the power of production that contracts are more quickly executed than formerly, and the slightest lull in the giving out of new orders is immediately felt. Prices remain unaltered, except as they follow alterations in iron and steel. From 13*l.* to 16*l.* per ton for iron bridges, and 15*l.* to 20*l.* for steel bridges, are inclusive rates. Numerous bridges of very large size are being built, and many more are projected in India and the colonies, the successful construction of deep-water piers and long span girders giving special encouragement to engineers. Steel is gradually being employed for small as well as large structures, especially where heavy loads have to be carried, as it is becoming evident that the advantages of steel are not confined to cases where the total cost can be brought down to that of iron by a reduction of weight, but are to be obtained by maintaining the same, or nearly the same, weight, the additional strength so gained being much greater than the additional cost. Steel can be bought at an increase of only 20*s.* to 30*s.* per ton above the price of good quality iron, the exact proportion between the two being mainly determined by the distance for carriage. And as the ductile steel with a breaking strength not exceeding twenty-eight tons per inch, which is now used for structures, can be as easily worked as iron, and by the same machinery, bridges and roofs can be bought for about 2*l.* per ton above the prices of iron structures of the same form and weight, though the difference is, of course, greater if the steel is in competition with low quality iron.

### THE GLASGOW FIRE.

THE following communication on the recent fire has been presented to the Town Council by some of the leading merchants in Buchanan Street:—

The fire which broke out on the evening of November 3 last, at No. 38 Mitchell Street, Glasgow, and which developed into one of the most serious conflagrations that has ever occurred in the city, involving the total destruction of Wylie & Lochhead's premises, the partial destruction of several properties adjoining thereto (although separated by complete party walls), and serious damage to the buildings and their contents in the blocks extending to north side of Mitchell Lane, west side of Mitchell Street, and towards Argyll Street—a space over 600 feet long by 230 feet in breadth, and embracing property at risk considerably over one million pounds sterling in value—has awakened the subscribers to the knowledge of the fact that the fire-extinguishing arrangements of the city are totally inadequate to cope with a conflagration occurring amongst the large warehouses in the central and more crowded districts, where the greatest values are deposited. The actual loss by the fire, irrespective altogether of loss and derangement of business, &c., may be estimated as little short of 150,000*l.*; and but for the valuable aid rendered by the employes of the surrounding warehouses and others, and the fortunate fact that the wind was not high when the fire broke out, it is believed that the destruction of property would in all probability have been ten



times greater. It is admitted that the fire brigade acted with great courage and determination; but we submit that the degree of protection provided for the ratepayers is quite insufficient and unworthy the city of Glasgow. In the first place, the water supply was very deficient on the occasion. We are informed that the pressure of water during the night (when fires are most frequent) is greatly reduced. If this be so, it is absolutely necessary that this arrangement should be altered, and made such as to secure an abundant supply of water under full pressure immediately on the occurrence of a fire. In the second place, a large addition to the strength of the brigade and to the number of steam fire-engines and other appliances is necessary; and when it is mentioned that the neighbouring burgh of Govan, with one-tenth of the population of Glasgow, possesses one steam fire-engine and a staff of fifteen men; and Partick, with a smaller relative population, one steam fire-engine and a staff of eleven men, surely Glasgow, with its half-million inhabitants, is sadly behind in possessing only three steam fire-engines. The three steamers—and, we understand, practically the whole force of the brigade—attended the fire, so that had another serious fire broken out in any other part of the city the brigade would have been powerless to give efficient service.

We consider it unnecessary to enlarge further on this important subject as the early hour in the evening on which the accident occurred gave a large number of the most influential citizens and officials the opportunity of seeing for themselves the magnitude of the danger to which the city is exposed from the existing weakness as regards numbers and appliances of the fire brigade. These weaknesses call for redress, and we, as very large payers of rates, trust that the necessary measures will at once be taken for securing the more effective limitation of large fires when they unfortunately occur. In addition to the heavy municipal rates paid by us, our insurance premiums are very onerous; and it is not unlikely that, with experience of November 3, if matters are not much improved as regards fire extinction arrangements, we shall be shortly face to face with still higher insurance rates, and probably also, in the case of some of us who have exceptionally large insurances to effect, with inability to get covered for our full values, as insurance offices may, in all probability, largely reduce the protection they presently give on warehouse blocks. We recommend the whole matter to your careful consideration and early attention.

One of the causes assigned for fires in Glasgow is the overheating of flues, when the ends of lintels or joists take fire. On this subject a correspondent of the *Herald* writes:—Were these buildings erected during the recent building mania in the city, when tenements rose like mushrooms, and no person was appointed to see that the work was properly executed? The flue of a chimney should be so constructed that, no matter how overheated, it should not endanger the building. But are there not brick gables in the city with ten or twenty chimneys in them only 18 inches thick, riddled with flues like a honeycomb? Each flue will be 9 inches square, and a 4½-inch brick is all that can be between the strapping and the flame if the flue is on fire; and suppose this flue not particularly built, but with joints open, can anyone not see that in nine cases out of ten fire may be the result? Or again, suppose the flue carefully built of common red brick, and the wall straps secured with iron holdfasts, and the gable receive a coat of plaster at the back of the straps on the brick; if often on fire the brick will be damaged, and a similar result may be anticipated. But what if wood dooks are driven into the joints of the brick to secure the straps, and no coat of plaster? I maintain that no vents should be formed in any wall of brick unless such wall is at least 27 inches thick, and either have fire-brick or fire-clay linings, and no stone gables should be built less than 30 inches thick, and all flues have fire-clay linings. The linings are indispensable in the case of stone walls with flues, because in the majority of quarries the stone produced does not stand fire. Again, such a thing as "back smoke" is often talked about. Without entering in detail on this matter, I would simply say to those who may be annoyed, let them test their flues by stopping them up at the top, and kindle anything in the chimney that will make smoke. If such comes out about the floor or skirting of the rooms above, their flues are at fault and in danger of fire, and should at once be rectified. Were all buildings to have fire-cocks on each stair landing, with hose long enough to reach any part thereof, and the necessary care in construction and erection duly attended to, and those that are found deficient rectified, I think that would be true political economy, instead of paying large sums to insurance companies. Buildings, no matter how extensive, if properly designed and erected with ordinary care, will not have much fire risk. It is only trifling with facts to blame timber linings when the sore is no doubt often in the thin but false economic walls, with smoke flues behind the linings and wall straps. I cannot believe in the economy of thin walls for flues with great fire risk. If vents be required in walls which otherwise can be 20 inches or 2 feet, let these be buttressed to 2 feet 6 inches.

**The Wolverhampton School Board** have agreed to instruct an architect to prepare plans for the erection of offices in Stafford Street, at a cost not exceeding 3,000*l*.

## ARTISANS' DWELLINGS.

THE Metropolitan Board of Works have issued a statement connected with the carrying out of schemes under the Artisans' Dwellings Acts. According to it, forty-one official representations have been under consideration; fourteen schemes have been or are being carried out, having a total area of 41½ acres. They involved the removal of about 21,000 persons living in 8,988 rooms. The cost to the ratepayers, after deducting the amount received for land sold and the value of that not yet sold, has up to the end of September 1883 been 1,247,956*l*. Dwellings have been erected on some of the areas, giving accommodation for 12,008 persons, others are in course of erection, and land is vacant, but not yet disposed of, upon which others may be built to accommodate about 14,300 more, making in all 26,300 persons provided for. The cost has been at the rate of 29,890*l*. per acre; or the cost of the land on which 26,300 will be housed is at the rate of 240*l*. for every family of five persons. Only four sites of those already available for disposal remain unsold—namely, three in Essex Road, Islington, and one in Goulston Street, Whitechapel. These were offered for sale by public auction on June 1, 1883, since which time negotiations have taken place for disposing of them by private treaty. They are to be again put up to auction early in 1884. Four other schemes were confirmed in July 1883, and are now being dealt with. These comprise 1,176 rooms, occupied by 2,683 persons. Some of the schemes submitted have been dealt with in other ways; one was rejected by the Home Secretary, and others were considered to be too small. The large amount specified as the net burden falling on the ratepayers will be further enlarged by the four schemes mentioned as having been confirmed in July last.

A table shows that the estimated cost of carrying out these four additional schemes is 86,480*l*., thus raising the total deficit to 1,334,436*l*. Irrespective of these four undertakings, there is a total of 151,193*l*., consisting of "approximate amounts paid for trades," a sum equal to rather more than 12 per cent. on the actual net cost of the schemes. Among the trades thus compensated there are those of 36 public-houses, besides 468 of other kinds. The largest amount of trade compensation occurs in 1877, in connection with the locality specified as Goulston Street and Flower and Dean Street. Here the approximate amount so paid was 45,340*l*. in respect to 134 "trades" and 9 public-houses. Next in magnitude of compensation is the Whitecross Street scheme, where the compensation was 34,770*l*. for 80 "trades" and 6 public-houses. This scheme figures as the most costly, the net expenditure being no less than 300,625*l*. The number of persons provided for in the new buildings at this spot is 5,100, the net cost being, therefore, at the rate of 290*l*. for each family of five. The number of persons displaced was 3,687, occupying 1,542 rooms, and the average rental per room per week was 2*s*. 6*d*. In King Street, St. George the Martyr, Southwark, the average rental per room was 1*s*. 10*d*. per week. In Wells Street the rental was still lower, being only a fraction more than 18*d*. per room. Here the number of persons displaced was over a thousand, and the same number will be accommodated, the actual net cost being 71,000*l*. The highest average rental per room was 3*s*. 2*d*. per week, appertaining to Bedfordbury and Great Wild Street. The Goulston Street and Flower and Dean Street site comes next to Whitecross Street for the extent of the net cost, the amount being 263,560*l*.; and, inasmuch as only 3,260 persons are to be provided for, the cost per family of five will exceed 400*l*. The persons displaced are 3,247, and the average rent they have been paying is 2*s*. 9*d*. per room weekly, the number of rooms being 1,381.

## ORGANISMS IN BUILDING MATERIALS.

A LETTER appears in the *American Architect* from Professor Fairfield upon Microscopic Organisms in Building Materials. In the course of it he says:—The decomposition vibrio is constantly present in the pores of bricks used in the construction of cesspools, interpenetrating the whole structure; and in large cities the moisture of the soil carries thousands in every drop. It exists by millions in every saturated splinter of the timber of decaying wood-pavements, and is frequent in the damp under-surface of paving stones. Let me give you a curious experiment, by way of showing the constancy in nature, not of the decomposition vibrio only, but of other organisms of decay. Arrange your instrument for examination; then construct a cell-slide capable of containing one minim of water, by cementing a glass circle or ring of the proper thickness to the surface of an ordinary slide. This done, cut the thinnest possible shaving from the interior of a block of perfectly dry white-pine or other timber; transfer the section to the cell, add a drop of water which has undergone the process of sterilising; cover with a common circle of glass carefully cleaned, hermetically seal the preparation, and place it under the lens. From the instant of cutting the shaving until the first clear observation is obtained, the interval occupied need not exceed ten seconds; but short as this interval is, the field is already alive with monads, the contact of the dry and apparently dead timber with moisture



having instantaneously reawakened millions of slumbering particles of living matter, which might have slept for years, possibly for centuries, had the timber been kept perfectly dry. A section of a dead leaf forms an equally interesting object for experiment; but if you put away the slide and wait for the secondary and tertiary development, the resulting organisms will not be vibrios, as in animal decomposition, but curious ovoid discs very sluggish in movement—a turtle-shaped organism with sixteen long, flexible tenacles at each end, and a bacteroid organism with dark lines of longitudinal striation, having twenty tentacles at each extremity. Forest mould after a summer rain swarms with these three microscopic forms of life; showing how nature in her wonderful laboratory is for ever engaged in economising her vital resources, and from the decomposition of the larger visible forms wrings an equivalent in microscopic organisms for each imprisoned particle of living matter; for to the experienced microscopist, whose optical analysis has penetrated deep into the processes of nature, there is no such thing as death, in the sense of the extinction of vital activities, in that mysterious basis of tissue forms, the so-called protoplasm, or living plasma from which brain and bone, muscle and membrane of our larger life are evolved; and the body that lies so silent in its coffin, though its functional activities have ceased, still lives in myriads of microscopic lives—those universally present organisms of decay described by your correspondent, hiding themselves in the pores of brick and stone, penetrating wherever moisture can penetrate. Lying ill on one occasion, several years ago, in a room on the second storey of a brown stone mansion in Twenty-eighth Street, during the winter, I became curiously interested in the drops of moisture oozing from the wall, and running down in tiny rivulets. My first work on getting so as to sit up in bed was to rig my microscope and make a study of this ooze, which proved to be loaded with vibrios of decomposition that had migrated through the brick walls, thus showing how essential to good sanitary construction it is that ample air and ventilating spaces should be left in the most solid and apparently impermeable structures.

### A NEW YORK PALACE.

THE new residence in Madison Avenue, New York, which is being erected for Mr. Henry Villard, the railway speculator, is nearly complete. This colossal structure occupies an entire block, having a frontage on Madison Avenue of 200 feet. The part which will be occupied is at the corner of Fifty-first Street. Its frontage is 60 feet, and its depth 100 feet. The other wing will be perfectly similar, except that it is divided into three houses; and between the two houses is a court 80 feet in width and 73 feet in depth. That portion of the building at back of the court extends back 40 feet beyond the wings, and is a double house of itself. In the centre of the court will be placed a magnificent fountain, around which will be a broad drive, and in each corner a grass plot. Each house will communicate directly with the court. Mr. Villard's house and two other houses are completed, excepting the interior, while the walls of the remaining wing are up to the second story. The exterior of the great building is more grand than beautiful. It is the result of a combination of Roman and Florentine architecture, plans of the Cancellaria Palace at Rome and the Farnese Palace being copied by the architects. The material is Belleville sandstone, the light grayish amber stone of which Trinity Church was built. Everything is massive, and there is little attempt at ornament. Huge blocks of stone are piled upon one another and overtopped by a heavy cornice of the same material. The wings are three stories in height, besides the basement and attic stories. From the sidewalk to the top of the cornice the measurement is 68 feet. The basement and first story are rusticated, and the others plain stone ashlar, with the angles strengthened by rustication. The front of the two centre houses is supported by five arcades, with heavy columns of Jonesboro granite. Dutch tiles cover the roof. The whole effect is severe and dignified. There is a magnificent reception room 14 feet by 28 feet in depth. Everything here is in inlaid wood, floor, ceiling, walls, and columns. On either side open the drawing-rooms. They are each 19 feet by 28 feet, and are being finished in mahogany, inlaid with light woods, satin wood and maple being noticeable. Between the pilasters will be hung rich embroidered stuffs. The predominating tones are a light reddish brown and a light yellow. The drawing-rooms and reception-room are so arranged that they can be thrown into one spacious apartment 100 feet in width and 28 feet in depth. From the reception-room a hall 14 feet in width and 42 feet in length leads to the music-room. Aladdin's lamp never revealed a hall more magnificent. It is entirely in mosaic. The material is yellow Italian marble. The floor is in Chaillon marble in small pieces, woven into beautiful designs. The mantel is a masterpiece of the sculptor from an Italian design, and the whole apartment was executed by Italian artists in the style of modern Pompeian palaces. The hall is spanned by three semi-circular arches in Sienna marble, with sculpture by Louis St. Gaudiens. A vestibule in the same design leads out of the hall, back of the drawing-room. The music-room is the *chef d'œuvre* of the decorator's art. It is a diminutive

theatre 48 feet by 24 feet in dimensions, and 32 feet from the floor to ceiling, extending to the third story. It is in the style of the Francis I. room of Fontainebleau Palace. The colours are white and gold. A wainscoting 8 feet in height in carved pine surrounds the room. At one end is a gallery for the musicians. The ceiling is an elliptical vault, and every detail shows the skill of the artist. Between the music-room and the vestibule, marble stairs 12 feet broad lead to the upper stories. Again the tone is yellow. An elaborate Renaissance ceiling spans the stairs. The elevated way occupies the remaining space. Across the hall are the main breakfast-room and dining-room, which can be thrown into one apartment 20 feet by 60 feet in size. Carved woods again replace the marble. The room is executed in English oak, inlaid with white mahogany. The ceiling is divided with beams cased with English oak, and the carved friezes, 3 feet in width, are inlaid with floral designs. The two mantels are of red Verona marble, and are copies of those which Mr. Mead was sent to Italy to select, but which arrived in a somewhat damaged condition, and were presented by him to the Museum of Art. Here also M. St. Gaudiens' skill is seen. The upper stories are in keeping with the splendour below, although, of course, not so elaborate. The general style is Italian Renaissance. The furniture will be especially magnificent. That of the drawing-room will be upholstered and of colours harmonising with the decorations, the reddish brown tone predominating. It was designed by the architects who executed the rooms. The other houses will be furnished in a style becoming their pretensions, although nothing like this. The cost of the building unfurnished will be about a million dollars. Of this sum the decorating of the drawing-rooms cost 50,000 dols.; the dining-rooms, 20,000 dols.; the hall, 30,000 dols.; and the music-room, 20,000 dols. As much more will be expended on other work in the latter room a year hence. To finish the interior of Mr. Villard's house necessitates the expenditure of 250,000 dols. The upper floors are now about completed, and the furniture is arriving. The structure, when completed, will be the most magnificent residence, building in the States, far surpassing the Vanderbilt houses. It is the first attempt made to reproduce an Italian palace in America.



### The Ventilation of the New Law Courts.

SIR,—In your journal of last week there is a commendatory article on the ventilation of these courts. There are a great many officials whose duties, like Mr. G. G. Kennedy's, compel them to be in daily attendance, who would, if opportunity offered, be willing to testify to the same effect. A few facts, therefore, bearing upon the matter, will help those who possess any knowledge of the subject to understand the real state of the case.

Taking the whole of the last term into account, which commenced on November 2, the ventilation was in charge of the writer, whose duty it was to see that the atmosphere of each court was kept in a state, and at a temperature, agreeable to the presiding judge. No complaints came from any of the courts during this time, with the exception of No. 3 Queen's Bench, where cold draughts were complained of. These, however, were found to be almost wholly due to structural defects in the ceiling and draughts from the jury doors, which no doubt caused some inconvenience, but these were not at any time sufficient to affect the thermometer, which recorded temperatures of remarkable steadiness, at no time showing below 62 deg. F.

With regard to the statement that cold and hot blasts of air alternate, it will be sufficient to state that at no time during the last term was the temperature of the inflowing fresh air below 66 deg. F. The actual range, taking the courts all round, was from 66 deg. to 74 deg. F.; nor is it possible to send absolutely cold air into the courts in the winter season; this danger was especially guarded against in laying down the scheme. The average temperature, taking the whole of the courts into account, was 63 deg. F., none of them being below 60 deg. No condensation was seen at any time on walls or windows—not in the most crowded courts. The average rate of interchange or renewal of the air was three times in the hour.

When the existence of the structural defects named above was made known, the authorities promptly took the matter up, and workmen are now engaged making the roofs air-tight, which, when completed, will put these courts in a condition, as regards ventilation, as perfect as those are that have sound roofs. It should, however, be borne in mind that the Houses of Parliament were not satisfactorily ventilated to begin with; it took a great deal of thought and time to get it into this state, so a little patience should be exercised, seeing that difficulties have to be surmounted far greater than could possibly be experienced in dealing with the two Chambers of Parliament.

Your obedient servant,  
Room 551, Royal Courts of Justice: FREDERICK BLAKE.  
January 9, 1884.



**Construction of Silos.**

SIR,—I want to construct a "silo" in a gravel pit 18 feet by 12 feet by 10 feet deep, holding 3 to 4 feet of water in it. Will anyone having experience in such matters kindly advise me if the following plan will succeed?

I propose pumping out the water and building a concrete floor 1 foot thick and concrete walls 1 foot thick, just high enough to flood the whole, until the concrete is sufficiently strong to resist the lifting strain of the water. When this is effected, which I suppose will take about two months, to again pump out the water, raise the walls the necessary height in brickwork, and cement the whole. My doubts are as to the setting energy of Portland concrete under water, its porosity, and also whether the cement may be relied on to keep out damp. Any suggestions will greatly oblige,

Your obedient Servant,

B.

**Builders' Grievances.**

SIR,—Mr. Stanley Bird's very able communication to you will, I think, commend itself to all interested—as he is so notoriously—in honest building. As he justly says, it is the jerry builder who is responsible for the present depression, and who is alike the enemy to the trade and the public.

I write, however, to suggest that if the idea of examining and giving a diploma of fitness to the *builder* sounds a little utopian and impracticable, there would be nothing impracticable in applying the same process to the *building*. Why, in fact, should not buildings be dealt with as are ships, and be surveyed and classified by some building "Lloyd's"? If it is necessary that the ship should be certified as to fitness by some central responsible body, why is it not as necessary for the house we live in? It may be that the classification would be optional on the part of the owner, but here at once would arise the distinction between the good and the bad house, for it would answer the purpose of every man building a good house to pay the fees to enable him to place with his deeds a "Building Lloyd's" certificate that his house is classed A 1 or otherwise in all respects, constructional, sanitary, &c.

Mr. Bird tells us that a meeting of representatives of the Royal Institute of British Architects and the National Association of Master Builders is shortly to take place. If any real and lasting result is to come of such a meeting, I venture to suggest that class interest on either side must be dropped, and measures which will promote the public interest must be alone discussed.

I have very imperfectly suggested one measure of public interest, and in connection with it I would name another. I refer to the much vexed question of the "arbitration clause." As a builder of twenty years' standing I have had the misfortune to meet with unscrupulous architects and employers, in which case an arbitration clause is a most valuable protection. On the other hand, no one can be brought much in contact with the honourable profession of the architect without learning that there is another side to the question. Contractors are not all Stanley Birds, and an arbitration clause in the hands of a scheming unscrupulous builder may involve the innocent employer in the most expensive form of litigation known. As a builder, therefore, I admit that the employer requires as much protection and consideration as does the builder. But he requires and is entitled to no more.

I submit that if some tribunal were constituted, having the architectural and building interests alike represented (some "Building Lloyd's" without its insurance element), the question of arbitration might be met upon a more equitable basis than at present, and without the hard and fast lines now insisted upon on either side.

Your obedient Servant,

Southampton: January 9, 1884.

H. I. SANDERS.

**The New York Produce Exchange.**

SIR,—In your issue of December 29, 1883, we find a paragraph in reference to the new Produce Exchange building in New York. In addition to the interesting facts stated, and as indicating the admirable provision made for the comfort of the members, it might be further mentioned that the building will be provided with no less than nine powerful and rapid Standard Hydraulic lifts, the contract for which was awarded to our New York house, Messrs. Otis, Brothers & Co.

Yours faithfully,

AMERICAN ELEVATOR COMPANY.

38 Old Jewry, London: January 3, 1884.

**Exhibition Buildings.**

SIR,—The interesting article by Professor Roger Smith in *The Architect* of the 5th inst. refers to the want of tact which was displayed by the late Sir Henry Cole when he inaugurated the annual technical exhibitions at South Kensington, which were doomed to be a failure. I always understood that the arrangement by which the galleries were kept closed on the sides abutting upon the gardens was mainly inspired by the selfishness of the authorities of the Horticultural Society, who at that time felt secure in their

possession of the public land. They were afterwards undeceived. But what I now wish to note is that the principle which should control an exhibition building, if it is to be successful, was well known to all who took part in the arrangement of international exhibitions. I possess Sir Digby Wyatt's own copy of his report on buildings of that class, *apropos* of the Vienna Exhibition, and it shows plainly enough that the necessity of arrangements by which visitors could congregate in one place was an acknowledged fact. In Vienna there was the great circular space, 354 feet in diameter, from which all the courts branched, and this was but the outcome, by a process of evolution, of the halls which existed in several of the earlier buildings.

In the Great Exhibition building of 1851 there was the immense nave. In the New York Exhibition building which came next (for the Cork building was not of much importance), there was a central space surmounted by a dome, which, although only 103 feet in diameter, was an anticipation of what was accomplished twenty years afterwards in Vienna. The principal feature in the Dublin Exhibition of 1853 was a splendid hall 425 feet long, 100 feet broad, and 105 feet high, which was used as a promenade, and, according to Sir Digby Wyatt, "its attractions mainly saved the undertaking from financial failure." The Paris Exhibition of 1855 was held in buildings which had been planned and commenced by a private company, and, as they were only adaptations, it is not surprising there were shortcomings in them. The Paris Exhibition of 1867 was on a rigorous scientific plan, in which the divisions were arranged according to the materials employed in the various industries. There was little need of a great hall, as visitors were able to congregate in the grounds. The exceptions prove the rule, and experience has demonstrated that the Commissioners of 1851 were endowed with foresight when they laid it down, among other rules, that in an exhibition building there should be "grand points of view" which were to be preserved under all circumstances, and that the main avenues should be so designed as to allow immense numbers of people to be accommodated on ceremonial occasions. In fact the design, which was prepared by the Building Committee, comprised a central rotunda 200 feet in diameter, which at that time was considered to be a very bold undertaking, and the area was enough to allow of a large assemblage.

Before the scheme of the Exhibition of 1851 was organised Digby Wyatt was sent over to Paris to observe the preliminary arrangements of the Exposition in the Champs-Élysées, and his companion on that occasion was Henry Cole. They were both amazed at the want of method and the bad planning. One defect was said to be the total impossibility of converting a part into a vast hall in which a multitude could assemble. The effect of a possible *ensemble* was entirely lost, and the impression of grandeur and unity on entering was sacrificed to a fancied regularity of plan. It is difficult to understand how Henry Cole could have felt the importance of some great nave or hall in 1849, and long afterwards had adopted a series of almost endless galleries as the best type of an exhibition building. In this case, as in many others, he was, I fancy, made responsible for the notions of other people; and what Professor Smith calls an unpardonable blunder is to be ascribed to the spirit of the council of the Horticultural Society rather than to Sir Henry Cole.

It may be noted here that Sir Digby Wyatt's ideal of an exhibition would somewhat resemble one of the great railway termini, in having no internal walls, the roof being supported by light, cheap columns, with the light coming vertically down from near the apex. In a building of this class the arrangement would be almost evident at a glance, which was not the case in the Fisheries galleries. I know a great many people who visited South Kensington last summer, and wandered here and there without seeing more than a part of the exhibits; and, although the "*al fresco* lounge," to which every one drifted sooner or later, was very attractive, it was hardly complimentary to the exhibitors to find that they could not compete with a military band.

Yours faithfully,

B. B.

**The House Tax and Artisans' Dwellings.**

SIR,—As you take a deep interest in the better housing of the working classes, will you allow me to bring before you one of the impediments to its accomplishment? It is the incidence of the House Tax; for when a private individual builds blocks of dwellings, where several families are housed in flats under one roof, although each tenant's rent is considerably under 20*l.* per annum, and he is separately rated to the poor, the House Tax is levied, and thereby his rent is increased by about 2*d.* per week. In 1866 the Chancellor of the Exchequer rendered free of this tax all dwellings owned by the Peabody Trustees and other associations of that character, but he refuses to extend this privilege to any dwelling owned by private individuals. As this is so manifestly unjust to the tenants of the latter class, I trust that you will assist in making this fact known generally, and endeavour to procure an alteration of the law in the next session of Parliament.

Yours faithfully,

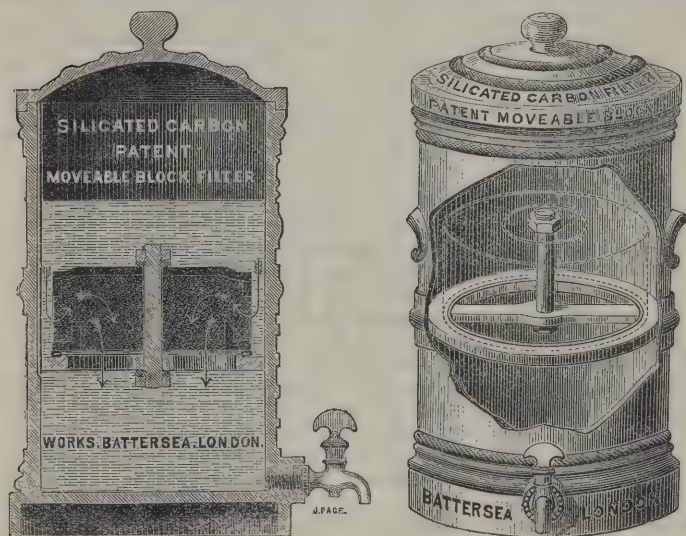
W. S. HORNER.

Aldgate: January 7, 1884.



## NOTES ON NOVELTIES.

**Silicated Carbon Patent Movable Block Filter.**—The accompanying cuts will explain the construction of the latest improvement introduced by the Silicated Carbon Filter Company in their filters. By means of a diaphragm inside a filter carrying a strut, an earthenware spindle is made to pass through the centre of a block of silicated carbon, which is then bolted down by a nut to a hollow flange of indiarubber. The removal of the nut releases the block, which can thus be instantly taken out for cleansing or removal, leaving the whole of the interior of the filter open for inspection. The working parts are all stoneware, and no corrosion is possible. The block itself being non-porous on the top and edges, an upward direction is given to the water, which thus passes through a greater



thickness of the silicated carbon, as shown by the arrows in section. Extra blocks can be supplied with a filter when desired, while all parts being interchangeable can be replaced in case of accident without the filter itself being returned to the makers. The patent movable block can be adapted to all patterns manufactured by the Silicated Carbon Filter Company without increased charge, and filters of other makes can be refitted on this principle when desired. The patent movable block filter has been designed to meet a growing demand for a filter of which every part is accessible for cleansing, and in which the filtering medium can be renewed by the user himself as often as required without returning it to the makers.

## ENGINEERING WORKS.

**Blackfriars Railway Bridge.**—On Saturday, the 5th inst., the foundation stone of the new railway bridge at Blackfriars was laid. The bridge, which runs parallel to the existing structure, and is a few feet to the east of it, consists of five bars supported on four piers of masonry and concrete, the foundations of each pier being two iron caissons (30 feet by 32 feet), which are coupled by an arch of masonry. These are loaded and sunk to a depth of 20 feet below the bed of the river. They are then pumped dry of water and filled with masonry and concrete. The bed of the river consists of ballast to the depth of some 5 feet. Next is London clay, which is of so hard a character as to render the use of the pick necessary for excavation. In this material the caissons are firmly imbedded. It is not generally known that this particular part of the river is one not favourable to bridge building, in consequence of the shallowness of the water on either side and the strength of the current in the centre. This necessitates great care being taken in the erection of the timber staging and all other work of a temporary nature. At the present moment there are a large number of workmen, concreters, timbermen, bricklayers, &c., busy day and night, and the works are being pushed forward with much energy. Mr. Wolfe Barry and Mr. Brunel, who act in conjunction with Mr. W. Mills, the engineer of the railway company, are the designers of the bridge, and the work is being executed by Messrs. Lucas & Aird, whose agent, Mr. H. Turner, personally superintends it. Mr. Crutwell is the resident engineer. The new City station of the London, Chatham, and Dover Railway, to which the new bridge will give direct access, will be shortly taken in hand. This will be a spacious building extending back to the river, the platforms, of which there are to be five, running some little distance on the new bridge. The booking-offices, waiting, refreshment and other rooms, will be larger than usual, owing to the amount of ground at the company's disposal, while it is intended to keep the arrival and departure platforms distinct, with the view of avoiding the confusion such as, for instance, exists at Ludgate Hill. It is likewise intended to throw some girders across Queen Victoria

Street, so as to afford trains in the new station a direct communication with the Great Northern and Midland Companies' lines. There will be covered ways from the District railway station at Blackfriars and Ludgate Hill, in order that the three stations may be in direct communication. Mr. W. Barry is the architect for the station. The estimated cost of the works for the bridge and station is 300,000/.

**The Hull and Barnsley Railway.**—The works upon the first section of this line from Hull to Cudworth have now made such progress that Messrs. Lucas and Aird, the contractors, are confident that they will have the section to Howden completed by May, while the remainder of the line and the docks will be finished by the end of the year. The directors have therefore determined, in order that no time may be lost in getting the whole system in working order, to commence the Halifax and Huddersfield extension, and the other authorised works by which a connection will be secured with the London and North-Western Railway, so that the company's line will then form part of a through route between Liverpool, Manchester, and Hull. The proposed extension commences near the Cudworth station, on the Midland Railway, by junctions with that line and the Hull and Barnsley original undertaking, now nearly completed; and it proceeds west, through the Flockton coal-field, to Huddersfield, and thence by direct route to Halifax, a total distance of about thirty miles.

**Hove Improvements.**—The Hove Commissioners have held a special meeting to consider two reports, one recommending the sealing of a contract with Messrs. W. Hill and Co., for the construction of a sea wall, with inclined and timber groynes, for the protection of the foreshore, for a sum of 23,946/., and the other recommending the Board to give general support to the London, Reigate, and Brighton Railway scheme, better known as the "Direct Railway." The first was met with an amendment to the effect that a less expensive scheme would be equally efficacious in protecting the sea front. This was negatived. The proposals relative to the railway also received opposition, an amendment being moved declaring that the introduction of the new line would be detrimental to the interests of Hove as a residential town. This was also on a division negatived, and the reports were adopted.

**The Mersey Tunnel.**—The boring of the heading of the tunnel is now practically an accomplished fact, less than 120 yards only remaining to be pierced, so that by the third week in the new year the subaqueous communication between Liverpool and Birkenhead will be effected. Further, by Christmas next the railway will be ready for traffic, and trains will be running between the city and borough. The operations have been carried out under the personal superintendence of the engineers, Messrs. Brunlees and Fox, by Mr. John Waddell, of Edinburgh, the whole being under the control of Major Isaac. Meanwhile, the directors are considering the position and importance of the scheme as affecting the converging railways in the district, with the ultimate purpose of promoting the interests of the shareholders in every possible way. The advantages of the tunnel for other purposes than railway traffic cannot be estimated too highly. At present the telegraph lines connecting Liverpool with Birkenhead run *via* Runcorn, while there is no intercourse by telephone. With the completion of the drainage heading, these inconveniences and wants will be remedied; the cables or wires will run direct under the Mersey, and bring either bank into immediate connection with the other. Possibly the heading might be utilised by the authorities for introducing the new water supply from the Vyrnwy Reservoir, North Wales, carrying the pipes or mains through to Liverpool, and in several ways the tunnel scheme will be conducive to the prosperity and convenience of the district. The mineral and goods traffic will be greatly accelerated by the opening of the Mersey Railway.

**The New Niagara Bridge.**—Niagara River is at length spanned in full view of the mighty cataract by the Michigan Central's cantilever bridge. On April 12 last a contract was entered into. The excavations for the foundations were begun April 15. The pits for the piers were finished, and the introduction of the beton cement begun June 6. The foundations were completed June 20 on the American side and seven days later on the Canada side. The first stone for the piers on the American side was laid June 25, and on the Canada side July 13. The American piers were capped August 20, and the Canadian September 3. On August 29 the first column of steel for the tower was lowered on the American side, and on the Canada side September 10. The last section of the American tower had been laid two days previous, and on the Canadian tower it was put down September 18. On the 24th the first iron for the cantilever was run out, and both cantilevers were soon completed. On the earliest opportunity a heavy beam of timber was thrown across, and the Canadian and American gangs of builders were able to clasp hands. One of them, Jack McCoy, found the temptation to be the first man to cross on the beam too strong for resistance, and over he went on a keen jump, in violation of the orders of his foreman. His eagerness to be the "first man" therefore secured for him what the workmen designate a "red ticket." In other words, he received immediate dismissal from the service of the contractors. The work of putting in the fixed span



began in the morning early, and when the hour of noon arrived the sections had been connected and the bridge practically completed. The principle of the cantilever plan is that of a trussed beam, supported at or near its centre, with the arms extending each way, and one end anchored or counter-weighted to provide for unequal loading. In practice it is entirely new, this being the only bridge completed upon the principle. The Firth of Forth bridge in Scotland, with a clear span of 1,000 feet, is being built upon this plan, and the Fraser River bridge, 315 feet clear span, on the Canadian Pacific. These are the only examples of this design yet undertaken. The total weight of the iron and steel entering into the composition of the massive structure is 3,000 tons. The bridge is of sufficient width for a double track, and is built to carry upon each track at the same time a freight train of the heaviest kind extending the entire length of the bridge, headed by two "consolidation" engines, and a side pressure of thirty pounds per square foot, which pressure is produced by a wind having a velocity of seventy-five miles per hour. Under these loads the structure is strained to only one-fifth of its ultimate strength. The total length of the bridge proper is 900 feet and 9 inches, divided into two cantilevers of 895 feet on the Canadian side, and 395 feet on the American side, supported on steel towers arising from the water's edge. A fixed span of 119 feet and 9 inches is suspended from and connects the river arms of the cantilevers. The clear span across the river is 494 feet and 9 inches, being the longest double-track truss span ever yet built. The bridge spans a chasm of 859 feet from bluff to bluff. The total weight resting on each of the towers under a maximum condition of strain is in round numbers 3,200 tons. The total uplifting force that can be exerted on each of the shore arms of the cantilever is 340 tons, and the weight of each shore anchorage is 800 tons. It will be seen that every single piece of material is five times as strong as it actually need be, so that the bridge can be strained to only one-fifth of its ultimate strength.

### ART WORKMANSHIP.

**Stained Glass.**—Two painted windows have been inserted in the church of Hoo, St. Werburgh, near Rochester. One window is in the east end of the north aisle, and is to the memory of the late Mr. Aveling, of Rochester. It has three lights with tracery of the fourteenth century. These are filled by three figures—David, Solomon, and Hezekiah; above the figures are decorated canopies, which run through the tracery. The figures are very kindly, and their robes are carefully and accurately represented. The second window is at the west end of the same aisle, and is to the memory of the late Mr. Aveling's mother. This window has two lights; the subjects in them are acts of mercy—*Hungry, and ye fed Me, Naked, and ye clothed Me*. The drawing, colouring, and grouping of the figures are artistic. The two windows were executed by Messrs. Heaton, Butler & Bayne.

### NEW BUILDINGS.

**Cardiff.**—Extensive alterations and additions are now being contemplated to flour mill premises, Canton, Cardiff, lately belonging to Mr. Longher, and recently destroyed by fire. It is proposed to reconstruct the building and adapt it for the purposes of a large factory for Messrs. John Marsh & Co. Mr. S. Rooney, of Crockherbtown, Cardiff, has been entrusted with the plans and supervision.

**Mold.**—A new rectory house is to be erected at Halkyn, near Mold, by the Duke of Westminster, who a few years ago erected the marble church in that parish, which is one of the most handsome churches in the diocese of St. Asaph.

**Saltburn.**—Sanitary and other alterations are being carried out at Upleatham Hall, Lord Zetland's marine residence, near Saltburn, under the direction of Messrs. Clark & Moscrop, architects, of Darlington.

**New Arcade, Birmingham.**—The Imperial Arcade is shortly to be opened in Dale End by Mr. Thomas Hall. The arcade, which adjoins St. Peter's church, has a frontage of about 68 feet, and a total depth of 135 feet. The front is of Darley Dale and Bath Stone, and is Renaissance in style. There are four shops facing into Dale End, two on either side of the principal entrance, and above them suites of rooms four storeys in height, intended to be let as offices or for kindred purposes. On the side next St. Peter's church there is a spacious arched entrance and staircase, giving access to the basement, which consists of one large room, 135 feet long, 55 feet wide, and 14 feet 6 inches high. There is an hydraulic lift connecting this room with the ground floor. The arcade is entered from Dale End through a vestibule 13 feet wide, closed at night by wrought-iron gates, and having plate-glass windows on each side, lighting partially two of the front shops. There is a passage 15 feet wide between the shop fronts on the ground floor, and the width increases to 23 feet 6 inches at the height of a gallery which has been carried

round the arcade in order to form a second floor. Each of the shops on this floor has a store-room over it. The arcade terminates in a kind of rotunda, which has a diameter of 21 feet on the ground floor and 30 feet at the level of the gallery. The roof is supported by semicircular moulded ribs, and is covered with embossed plate glass, and has a large dome over the rotunda; while domed transepts cover the gallery staircases, which on either side ascend at mid-distance between the two extremities of the arcade. The staircase of the gallery next to St. Peter's church, as well as the staircase leading from the exterior to the basement, is at once lighted and ornamented by large stained-glass windows, with figure subjects; and the walls of the rotunda are broken by stained-glass lights of geometrical pattern. The contractor for the stonework has been Mr. John Garlick, of Salford; while the wrought-iron gates have been executed by Messrs. Brawn, of Clement Street; the gasfittings supplied by Messrs. Hunt & Co., of Camp Hill; the lift by Messrs. Tangye, the stained and other glass by Messrs. Hawkes, of Bromsgrove Street; and the mural decorations by Mr. Robert Mann, of Colmore Row. The works have been carried out from the designs and under the superintendence of Mr. Henry Naden, architect.

### CHURCH BUILDING AND RESTORATION.

**Oldham.**—It is proposed to erect a new church in lieu of the present structure of St. Peter's, Oldham, which is the oldest in the borough. The sittings, 753 in number, are found to be quite inadequate to the requirements of the population of the parish.

**Stretford.**—Plans are in course of preparation by Mr. G. T. Redmayne, architect, of Manchester, for the erection of the proposed new mission church in connection with the parish church, Stretford.

**Folkestone.**—An extensive scheme has been prepared and is under consideration for the further improvement of Christ Church, from the plans of Mr. A. Rowland Barker, consisting of a new chancel, extending 25 feet longer than the present building, and the construction of north and south transepts, with the completion of the tower, at an estimated cost of 3,500*l*.

**Dallinghoo.**—The church of Dallinghoo has been restored and reopened. The work carried out consists of new organ chamber with arch opening into the nave, new east window, new oak seats in nave, with richly carved and panelled ends and fronts. The seats at the east end have been arranged stall-wise for the choir, and those on the south side are of oak, with moulded and carved ends, but on the north side the old pulpit and prayer-desk, &c., of Jacobean work, have been altered and refixed. The paving has been laid with tiles from Godwin's works in Herefordshire. The principal part of the work has been carried out by Mr. Stephenson and Messrs. Fosdike, of Woodbridge, from the designs of Mr. William Bassett Smith, of John Street, Adelphi, W.C.

**Belfast.**—The memorial-stone of a Presbyterian church, in course of erection at Fortwilliam Park, has been laid. The style of the building is Gothic, the materials being selected stone of a light tint, from the Glebe Quarry, for the face of the walls and dressings, together with a sparing use of Dumfries stone for the horizontal mouldings, plinths, &c., also for shafts to doors, windows, pinnacles, and carved panelling. The length of the church is 85 feet by 52 feet wide, exclusive of the tower and octagon turret. The height of wall is 45 feet to the eave and 78 feet to the ridge line. The tower is placed at the south-west angle, and with the spire will rise to a height of 178 feet. It is carried up in four stages to a height of 90 feet to the base of the spire. The buttresses are terminated by massive crocketed pinnacles, having carved finials. From this the spire is carried up with carved crockets on the angles, and lucarnes 25 feet high. At the opposite corner a semi-octagonal turret is placed 72 feet high. The church is seated with open benches, having framed and stop-chamfered backs, moulded capping of walnut, and moulded birch ends. Accommodation is provided for 868 persons. The roof is strongly framed with five queen-post principals, ceiled to the level of the collar-beam, and cut into panels by moulded ribs, intersecting the principals and purlins. The moulded ribs of the principals are brought down and rest on carved stone corbels. A deeply-moulded cornice is carried along both sides of the church. The ventilation is provided for by zinc tubes in the roof, carried up to a large air-pump (Boyle's) placed in the flèche. This flèche is of ornamental design, and rises on the roof to a height of 105 feet above the ground-line. Inlets for fresh air are placed in the side-walls by means of galvanised iron ventilators, with internal regulating ventilators, in addition to those of the windows. The heating will be by hot-water pipes. A fall in the ground on the site of the church has been utilised to provide a lecture-hall, giving accommodation to 500 persons, together with session and other rooms, lavatories, heating-chambers, &c. The work is being executed by Mr. Henry, builder, from the plans and under the superintendence of Mr. Henry Chappell, C.E., architect. Mr. William Malcolm is foreman of the works.



**Lichfield.**—Huits Church, a newly-erected structure, has been opened. The building comprises nave and chancel, with south porch and vestry. The style is Early English, and the building is lighted throughout by tall lancet windows, many of which are filled with stained glass. The church is built of Yorkshire stone, with red stone dressings from Alton quarries. Mr. Horsman, of Wolverhampton, was the contractor, who carried out the work from the designs of Mr. John Oldrid Scott.

**Marston.**—The parish church has been reopened after restoration. This has included the reparation and renovation of the roofs. During the work remains of old tiles were found, and these have been copied for the chancel flooring. The church is built principally in the late Perpendicular style, the arcades and chancel arch being of transition Norman. The work was carried out by Mr. J. Honour, of Marston, under the superintendence of Mr. H. Drinkwater, architect.

**Finningley.**—It is proposed to restore the church of Finningley, a village in Nottinghamshire, plans for which have been prepared by Mr. Fowler, of Durham. The church consists of a nave of three bays, with a north aisle, a western tower, a south porch, and a chancel with a chapel or aisle on its north side. Little is known of its foundation, but traces of Norman remains are still to be seen in the south doorway and the lower part of the tower. About the year 1300 the small Norman chancel gave way to the present large one, with its high arch opening into the nave, traceried windows, &c. The nave and chancel were covered with high-pitched roofs, which were replaced about the year 1400 by the present ones of great originality and beauty. The chancel roof has arched principals with carved bosses of foliage or figures, and considerable remains of the coloured decoration which originally extended over all. The sun, moon, and stars are apparent as well as foliage and scrollwork. Amongst the carved figures on the bosses are represented a king with sceptre in one hand and sword in the other; an archbishop, holding his archiepiscopal cross in his right and a hammer in his left hand, and therefore probably representing St. Eligius, the patron saint of smiths; a merchant, Janus, &c.

## SCHOOL BUILDINGS.

**Berwick.**—St. Cuthbert's Roman Catholic schools, which have been erected in Walkergate Lane, Berwick, at a cost of about 600*l.*, have been opened. The schools are in the Gothic style of architecture, and will accommodate 250 children. The architect is Mr. W. Gray, jun., Berwick.

## ARCHÆOLOGY.

**The Roman Forum.**—The excavations at the so-called House of the Vestals have been continued. The latest discoveries are another full length statue, or rather more than life-size, but with the head and hands wanting; the *torso* of a third, from the neck to below the waist; the right knee of a fourth; a beautiful bracelet, or small necklace, of alternate rings of gold and uncut amethysts, with clasp complete; four more pedestals of statues of superior Vestals, with inscriptions, and an interesting inscription relating to the *Castra Peregrina*.

## GENERAL.

**Mr. W. P. Burton**, the landscape painter in water-colours, died on December 31 at the residence of his sister, near Aberdeen. Mr. Burton, who at the time of his death was fifty-six years of age, was a constant exhibitor at the Royal Academy and at the Dudley and Grosvenor Galleries, and was recently made a member of the Society of British Artists. He was a nephew of the late Dr. John Hill Burton.

**The Collection of Ancient and Modern Prints** formed by the late Mr. St. John Dent, of Bryanston Square, will be sold by Messrs. Sotheby, Wilkinson & Hodge, early in April. It includes many of the finest examples known of the early Italian masters, besides a brilliant display of German and Dutch prints, and rare English portraits.

**The Exhibition** of the Glasgow Institute of Fine Arts will open on February 5. There will be a private view on the day before.

**The Oldham Exhibition**, which had been open five months, was closed on Saturday evening. During its progress 290,000 persons paid for admission, and the total receipts were 14,000*l.*

**The Royal Cambrian Academy of Art** have applied to the Privy Council for a charter of incorporation.

**Mr. Charles Lever**, of Culcheth Hall, Bowdon, Cheshire, has been awarded a "diploma of honour," for special services rendered by him in connection with the lighting of the council chamber,

lecture theatre, picture gallery, and dining-rooms at the Fisheries Exhibition at South Kensington, by means of his "Lever Arc Lamp."

**The Edinburgh Dean of Guild** has approved of the design for the pedestal of the group *Alexander and Bucephalus*, by Sir John Steele, which is to be erected at the intersection of St. David Street with George Street.

**A Site** for the College of North Wales at Bangor has not yet been secured. A meeting is to be held shortly, when temporary premises will be selected.

**Canford Manor**, the residence of Lord Wimborne, near Wimborne, was on Sunday partially destroyed by fire. Some valuable Worcester china and some fine oil paintings were destroyed, and much damage was done by water. The central part of the building is completely gutted, and several thousand pounds' worth of property has been destroyed.

**A Carved Pulpit**, executed in old oak from Preston-on-Wye church, and designed by Mr. Thomas Nicholson, architect, Hereford, has been placed in Diddlebury parish church.

**Mr. Edis's Cantor Lectures** on "The Building of London Houses" will be delivered at the Society of Arts on February 18, 25, and March 3.

**The Ratepayers of Bury** have been polled on the question of an application to Parliament for further borrowing powers, to the extent of 211,000*l.*, for purposes of borough improvements. A majority of votes was given in favour of the proposal, but so many were invalid that the question has been decided in the negative by 4,022 against 3,837.

**The Mayor of Eastbourne** has laid the keystone of the nearly-completed new sea-wall works at the east end of the town. The extension will provide an unbroken promenade from the Redoubt Forts along the sea front to the slopes of Beachy Head, a distance of three miles. The total cost has been 49,000*l.*; but, as the Corporation have leased the spare ground near the sea-wall for ninety years, the actual cost to the town is only 12,000*l.*

**The Partnership** between Mr. W. Watkins and Mr. W. Scorer, architects, Lincoln, has been dissolved.

**The Milton School Board** have received plans for a new Board school from Mr. Charles Bell, Mr. W. F. Gosling, and Mr. W. Gould.

**The Derby Town Council** on Wednesday resolved to erect a new lunatic asylum on the site of forty-two acres known as the Rowditch Estate. The land is valued at 400*l.* per acre, and the building is estimated to cost 30,000*l.*

**The Electric Lighting** of the House of Commons will be increased by an addition of about 200 lamps, which will bring the number up to 500. The plant will be ready for use for the opening of Parliament on February 5. The system is an amalgamation of the Edison and Swan systems.

**Captain Shaw** has been examining the corrugated iron curtains now compulsorily used in all German theatres. The largest curtain in Germany, that of the Stadt Theatre at Hamburg, is 39 feet in height and 42 feet wide, and it can be lowered with perfect ease and certainty in twenty seconds. According to Captain Shaw the curtain would certainly stop the strongest flames for at least fifteen minutes, and would probably do so for a much longer time.

**An Anvil** for a 12-ton steam hammer has been cast at the Clydesdale Iron Company's works at Holytown, and is the largest casting of this kind yet attempted. Its weight when finished is estimated to be 250 tons, and the operation of casting this immense block occupied 31 hours, during which time a constant stream of fully eight tons of molten iron per hour was kept running into the casting frame, and the whole of the iron was kept in a liquid state for the 31 hours.

**The Clothworkers' Company** have voted a grant of 1,000*l.* towards the scheme for erecting a people's palace in East London in connection with the Beaumont Trust.

**The Engineers' Estimate** for the proposed Manchester Ship Canal has been lodged in the Private Bill Office of the House of Commons. The grand total estimate is 6,904,186*l.* 12*s.* 6*d.*, and is made up as follows:—For the nine connecting lines of railway, 456,172*l.* 1*s.* 4*d.*; for dock works at Manchester and Warrington, 1,121,262*l.* 13*s.*; for canal works, 3,920,171*l.* 11*s.* 7*d.*; for estuary works, 1,390,419*l.*; and for new roads, 16,161*l.* 6*s.* 3*d.*

**A Return** has been furnished by a firm at Bilston, showing the cost of making finished iron during the past forty years:—In 1843, when medium pigs were 50*s.* per ton—about the average of the present day—the cost for producing a ton of rolling iron was—pigs and castings, 2*l.* 18*s.* 4*d.*; wages, 18*s.* 4*d.*; fuel, 8*s.* 2*d.*; stores and fettling, 2*s.*; rent, taxes, and general charges, 3*s.* 11*d.*; total, 4*l.* 10*s.* 5*d.* Against the foregoing figures the cost in the present day is—pigs and castings, 3*l.* 0*s.* 4*d.*; wages, 1*l.* 7*s.* 7*d.*; fuel, 1*l.*; stores, &c., 9*s.* 5*d.*; and rent and general charges, 3*s.* 10*d.*; total, 6*l.* 1*s.* 2*d.*



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JANUARY 12, 1884.

### APPOINTMENT VACANT.

CHELMSFORD.—Jan. 25.—Applications are required by the Chelmsford Rural Sanitary Authority for the Appointment of a District Surveyor. Salary 250*l.* per annum. Applications are also required for the Appointment of an Assistant Surveyor for the District. Salary 200*l.* per annum. Mr. W. W. Duffield, Clerk to the Rural Sanitary Authority, 96 High Street, Chelmsford.

### COMPETITIONS OPEN.

ABERDEEN.—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10*s.* 6*d.* to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

BLOEMFONTEIN.—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

CAPE TOWN.—Jan. 30.—The Town Council of the City of Cape Town invite Plans and Specifications, accompanied with approximate estimate of cost, of a System of Drainage. Selected Plans and Specifications to become the absolute property of the Corporation. All others will be returned free of expense. Premium of 250*l.* A plan of the City, with levels, may be seen, and further information may be obtained, on application to the South African Loan, Mortgage, and Mercantile Agency, 9 King William Street, London, E.C.

LEICESTER.—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

LONDON.—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

ST. PANCRAS.—Feb. 1.—Designs are invited for Buildings for Mortuary and Coroner's Court. Mr. T. Eccleston Gibb, Vestry Clerk, Vestry Hall, St. Pancras Road, N.W.

UXBRIDGE.—Jan. 31.—For System of Sewerage and Sewage Disposal. Mr. Charles Woodbridge, Clerk to the Rural Sanitary Authority, Uxbridge.

WALMER.—Jan. 21.—Designs are invited for Laying Out the Estate of St. Clare for Building Purposes. Messrs. W. & T. Denny, Walmer.

### CONTRACTS OPEN.

ABERDEEN.—Jan. 14.—For the various Works, including Ironfounder's, connected with the Erection of Additions to Steam Laundry. Mr. J. Russell Mackenzie, Architect, 91 Union Street, Aberdeen.

ABERDEEN.—Jan. 26.—For Supplying, Erecting, Fixing and Testing Hydraulic Machinery, for the new Dock Gates, Victoria Dock. Mr. Wm. Smith, Harbour Engineer, Aberdeen.

ARDEE.—Jan. 15.—For Sinking of Open Drains or Water Courses on the north and south sides of the River Dee, and the Construction of Tanks and Sewers, with Auxiliary Works. Mr. Thomas B. Dromgoole, Sanitary Officer, Board Room, Ardee Workhouse, Ireland.

ARDROSS.—Jan. 14.—For Construction of Works for Draining the Ardross Back-fields, Elie. Mr. Alexander C. Boothby, C.E., Kirkcaldy.

AVIEMORE.—Jan. 24.—For Construction of Bridge over the River Spey; Masonry, &c., in Abutments and Pier, Wrought-ironwork Superstructure, and Cast-iron Cyllinders in Pier, &c. Mr. W. Roberts, Engineer, Surveyor's Office, Kingussie.

BALLATER.—Jan. 17.—For Construction of Stone Bridge over the River Dee, with Cast-iron Cyllinders, Foundations, Approach Roads, and Works in connection. Messrs. Jenkins & Marr, C.E., 16 Bridge Street, Aberdeen.

BAMFORD.—Jan. 19.—For Fencing Site of proposed Church of St. Michael. Mr. H. C. Charlewood, Architect, 6 John Dalton Street, Manchester.

BARNSELY.—Jan. 21.—For Building Two Dwelling-houses in Sackville Street. Messrs. Dixon & Moxon, Architects, 5 Eastgate, Barnsley.

BATLEY CARR.—Jan. 18.—For Building Shop and Dwelling-house. Messrs. Kirk & Sons, Architects, Dewsbury.

BECKENHAM.—Jan. 14.—For Works of Paving, Kerbing, and Footpaths Improvement, comprising about 22,000 feet of Pennant stone and granite kerb, 4,000 feet of granite channelling, and 2,000 square yards of 2-inch red brick paving, the Relaying of about 8,000 feet of Purbeck kerb, and other works in connection therewith. Mr. Geo. B. Carlton, C.E., Surveyor to the Local Board, Beckenham, Kent.

BEDFORD.—For Building Bedford Town and County Club. Mr. H. A. Cheers, Architect, Waldegrave Park, Teddington.

BELFAST.—Jan. 13.—For Alterations and Additions to Donegall Hotel, Donegall Square West. Messrs. Young & Mackenzie, Architects, Donegall Square East, Belfast.

BERWICK-ON-TWEED.—Jan. 22.—For Single-lift Gasholder for Works at Spittal, for the Berwick and Tweed-mouth Gaslight Company. Mr. Paterson, C.E., Warrington.

BERWICK-ON-TWEED.—Jan. 22.—For Construction of a Cast-iron Gasholder Tank, at the Works, Spittal. Mr. Paterson, C.E., Warrington.

BIRMINGHAM.—Jan. 12.—For Building Potato Stores, Smithfield Market. Mr. William S. Till, Borough Surveyor, Council House, Birmingham.

BLACKBURN.—Jan. 12.—For Wrought-iron Girders and Castings for Bridge over Blakewater. Mr. J. Braddon McCallum, Borough Engineer, Municipal Offices, Blackburn.

BLACKBURN.—Jan. 12.—For the Supply of Granite, Limestone, Stone for Under-bedding, Lime and Cement, Setts, Sidestones, Circular Kerbs and Flags, Iron Castings, Bricks, Timber, Wallstone, &c. Mr. J. B. McCallum, Borough Offices, Municipal Offices.

BLACKPOOL.—Jan. 29.—For Construction of Gasholder Tank. Mr. Chew, Engineer, Gas Office, Blackpool.

BOLTON.—Jan. 16.—For Construction of Station Buildings at Daubhill and Chequerbent, near Bolton. Drawings and Specifications at the Engineer's Office, Euston Station.

BOLTON.—Jan. 19.—For Construction of Outfall Sewage Works at the Hacken. The Borough Surveyor, Town Hall, Bolton.

BOULTHAM.—Jan. 16.—For the Erection of an Engine-house and Boiler-house, at the Lincoln Waterworks, Boultham. Plans and Specifications at the Waterworks, Office, Saltergate, Lincoln. Mr. H. K. Hebb, Clerk to the Urban Sanitary Authority.

BOW.—Jan. 17.—For Building Stables, Loose Boxes, Omnibus Shed, Foreman's House, and Boundary Walls, for the London General Omnibus Company, Limited. Mr. R. T. Kingham, Secretary, 6 Finsbury Square, E.C.

CALVERLEY.—Jan. 15.—For the various Works in connection with the Rebuilding of Hollypark Mills, Calverley, near Leeds. Mr. Jowett Kendall, Architect, Idle.

CHRISTCHURCH.—Jan. 17.—For Repairs and Alterations to Workhouse, damaged in the late Gale. Mr. Druiitt, Christchurch, Hants.

CLACTON-ON-SEA.—Jan. 21.—For Building Ten Houses for Mr. Charles Garrod, South Lodge, Forest Hill.

CRICKHOWELL.—Jan. 16.—For Building Chapel at Llanbedr. Mr. Aaron Davies, Architect, Pontlottyn, near Cardiff.

CRICKLEWOOD.—Jan. 18.—For Making-up, Kerbing, Channelling, Metalling, and Tar-paving Claremont Road. Mr. J. Pollard, Surveyor to the Hendon Local Board, Brent Street, Hendon.

DUBLIN.—Jan. 24.—For Building a Dispensary in South Earl Street, for the South Dublin Union. Mr. W. M. Mitchell, Architect, 10 Leinster Street, Dublin.

DUMFRIES.—Jan. 21.—For Erection of Station Buildings, Platform, and Platform Wall. Drawings, &c., at the Engineer's Office, St. Enoch Station, Glasgow.

DYMOCK.—Jan. 14.—For Alterations and Additions to Dymock Schools. Messrs. Waller Son, & Wood, Architects, 17 College Green, Gloucester.

EASTBOURNE.—Jan. 31.—For Erection of Town Hall and Municipal Buildings. Mr. Charles Tomes, Borough Surveyor, Eastbourne. Mr. W. Tadman Foulkes, Architect, 100 Colmore Row, Birmingham.

EAST DEAN.—Jan. 17.—For the Construction of an Impounding Reservoir at Greenbottom, in the township of East Dean. Plan and Specification at the Office of the Surveyor, Cinderford.

EAST WALKER.—Jan. 14.—For Building an Infants' School, and for Alterations and Additions to Board Schools. Mr. John Johnstone, Architect, 6 Clayton Street West, Newcastle-on-Tyne.

EBBW VALE.—Jan. 26.—For Building Hotel and Stables. Mr. E. A. Johnson, Architect, Abergavenny.

EDMONTON.—Jan. 15.—For Laying Rainwater Drains, Building Small Pump-house, Fixing Pump and Tank, &c. Mr. T. E. Knightley, Architect, 106 Cannon Street, E.C.

ELGIN.—Jan. 18.—For Supply of Material and Carrying out Works of Water Supply, Westfield. Mr. H. M. S. Mackay, C.E., Elgin.

ELIE, N.B.—Jan. 15.—For Building Farmhouse at Orkie, Kettle. Mr. John Currie, Architect, Elie, N.B.

ELIE, N.B.—Jan. 25.—For Building Coastguard Station. Director of Works Department, Admiralty, 71 Spring Gardens, London, S.W.

ENFIELD.—Feb. 19.—For Building Separate Workhouse Schools. Mr. T. E. Knightley, Architect, 106 Cannon Street, E.C.

FINCHLEY.—Jan. 14.—For Paving, Metalling, Kerbing, Sewering, and Making-up of Brownlow Road and Grunelsen Road. Mr. G. W. Brumell, Surveyor to the Local Board, Local Board Offices, Church End, Finchley, N.

FRASERBURGH.—Jan. 14.—For Building House for Mr. Mortimer, Brewer. Messrs. Jenkins & Marr, C.E., 16 Bridge Street, Aberdeen.

FYVIE.—Jan. 19.—For Building Dwelling-house, Cowhill. Mr. Chalmers, Rothiebrisanne.

GOOLE.—Jan. 14.—For Alterations to Alexandra Street Board Schools. Mr. William Watson, Architect, Wakefield.

GREAT BENTLEY.—Jan. 19.—For Building School and Chapel Keeper's House. Mr. F. Evelyn Morris, Architect, Colchester.

HULL.—Jan. 17.—For Formation of Adit or Tunnel (one mile) from Springhead Pumping Station. Mr. D. Maxwell, Engineer, Town Hall, Hull.

IDLE.—Jan. 14.—For Building Tenter House, &c. Mr. Jowett Kendall, Architect, Idle.

ILKLEY.—Jan. 14.—For Building a large Conservatory at Wells House Hydropathic Establishment. Mr. T. G. Andrews, Architect, Old Bank Chambers, Bradford.

KEGWORTH.—For Alterations and Additions to House. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

KENNY.—Jan. 17.—For Building Farmhouse at Backhill. Mr. John Rust, jun., Architect, 4 Bridge Street, Aberdeen.

KINROSS.—Jan. 17.—For Construction of Works for Supplying the Burgh with Water. Mr. W. R. Copland, C.E., 146 West Regent Street, Glasgow.

KINROSS.—Jan. 25.—For Repairing and partly Rebuilding March Dyke, with Wires on the top, between Kin-



craigie and Pitgorns, near Strathmiglo. Mr. Geo. Bogie, Solicitor, Kinross.

KIRKBY-IRELETH.—Jan. 22.—For Improvement and Re-fitting of the Parish Church. The Committee for the Improvement of Kirkby-Ireleth Parish Church, Kirkby-in-Furness.

LANCASTER.—Jan. 14.—For Building Residence for Mr. A. W. Hunt. Messrs. Paley & Austin, Architects, Lancaster. Mr. W. Wright, Surveyor, Lancaster.

LEEK.—Jan. 26.—For Reconstruction and Enlargement of Primitive Methodist Chapel and Schools. Messrs. W. Sugden & Son, Architects, Teek.

LIGHTCLIFFE.—Jan. 12.—For Building a Villa. Mr. Charles F. L. Horsfall, Architect, Lord Street Chambers, King Cross Street, Halifax.

LONDON.—Jan. 23.—For Lighting the Mansion House by Electricity. Mr. Horace Jones, City Architect, Guildhall, E.C.

LONDON.—Jan. 25.—For Lighting certain Streets in the City by Electricity. Mr. Henry Blake, Sewers Office, Guildhall, E.C.

MENTON.—Jan. 15.—For Excavation and Building Foundations for the New West Riding Asylum. Mr. J. Vickers Edwards, Surveyor to the County Authority, Wakefield.

MIDDLESBROUGH.—Jan. 19.—For Construction of Hury Reservoir (Contract No. 3). Mr. Mansergh, C.E., Engineer, 3 Westminster Chambers, Victoria Street.

MIDLAND RAILWAY.—Jan. 17.—For the Erection of an Ironfoundry at Derby and a Goods Shed at Glascoote, near Tamworth. Drawings, Specification, and Quantities at the Engineer's Office, Midland Station, Derby.

MIRFIELD.—Jan. 21.—For the Works in the Enlargement and Additions to Westfield House, The Knowle, Mirfield. Mr. Walter Hanstock, Architect, Branch Road, Batley.

MORLEY.—Jan. 14.—For Making Roads, Planting, and Laying Out Morley Cemetery. Mr. Edwin Butler, Clerk to the Burial Board, Victoria Road, Morley.

NEWARK.—Jan. 14.—For Building Villa Residence for Mr. W. Moss. Mr. G. Sheppard, Architect, 9 Kirkgate Newark.

NOTTINGHAM.—For Building Offices in London Road, Mr. Arthur Marshall, Architect, Long Row, Nottingham.

PENDLETON.—Jan. 16.—For Erection of Public Baths in Broad Street and Frederick Street. Mr. Lawrence Booth, F.R.I.B.A., Architect, 28 Faulkner Street, Manchester.

READING.—Jan. 22.—For Works required in Alterations of the present Buildings of the Reading and Earley combined Board School, and in the Erection of Additional Buildings for the Infants' Department. Messrs. Morris and Stallwood, Architects, Friar Street, Reading.

RHYL.—Jan. 15.—For Construction of an Overbridge, with Approaches and Railway Station, near Towyn Level Crossing, Rhyll. Plans at the Engineer's Office, Bangor.

RIO DE JANEIRO.—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

ROCHDALE.—Jan. 16.—For Supply of Cast-iron Pipes Mr. H. Rofe, Waterworks Office, Lord Street, Rochdale.

ROCHESTER.—Jan. 23.—For the Construction of a Bridge to carry a Double Line of Railway over the River Medway. Plans and Particulars at the Engineer's Office, 5 St. Thomas' Street, London Bridge, S.E.

SANDIACRE.—For Building Villa. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

SALTLEY.—Jan. 16.—For Execution of Road Works. Mr. Digby Jenkins, Surveyor to the Local Board, Park Road, Saltley.

SCOTHOLOME.—For Building Wesleyan Chapel. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

SLINFOLD.—For Building Villa. Mr. W. Blackwall, Slinfold, near Horsham.

SOWERBY BRIDGE.—Jan. 26.—For Building Cartwright's Shop (two storeys) and Dwelling-house, Allen Road. Mr. Charles F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

STOKE D'ABERNON.—Jan. 17.—For Building Brick Bridge over the Mole Backwater. Mr. T. H. B. Heslop, C.E., District Surveyor, Thames Ditton.

ST. PANCRAS.—Jan. 24.—For the Erection of Additional Workhouse Buildings for 500 Inmates, on Cook's Terrace Site, adjoining the Workhouse, St. Pancras Road. Mr. H. H. Bridgman, Architect, 42 Poultry, E.C.

WEST WALKER.—Jan. 14.—For Extensive Additions and Alterations to the Board Schools. Mr. John Johnstone, Architect, 6 Clayton Street West, Newcastle-on-Tyne.

WORKINGTON.—Jan. 15.—For Building Five Houses, Duke Street. Mr. W. C. Jennings, Architect, 72 Main Street, Cockermouth.

## TENDERS.

### ABERDEEN.

For Building Two Houses in Great Western Road, Aberdeen. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.

Buchan, mason work.

Roger, carpenter and joiner work.

Pirrie, slater work.

Roger & Baxter, plaster work.

Gunn & Elder, plumber and gasfitter work.

Slaker & Sons, painter and glazier work.

### ACTON.

For Enclosing Two Acres of Land, Cumberland Park Estate, Acton, with Oak Park Fencing, for a Lawn-tennis Ground. Mr. ALFRED WRIGHT, Architect and Surveyor, Belgrave House, 190A Brompton Road, and 18 Hayter Road, Brixton Rise.

LONGLEY & SONS, Worth, Sussex (accepted).

For Laying-out Lawn-tennis Ground on the Cumberland Park Estate, Acton. Mr. ALFRED WRIGHT, Architect and Surveyor, Belgrave House, 190A Brompton Road, and 18 Hayter Road, Brixton Rise.

Atkins	£380 0 0
Nowell & Robson	350 0 0
Narroway	292 0 0

### BUTTERKNOWLE.

For Building Miners' Hall, Butterknowle. Mr. R. LITTLEFAIR, Architect, Lynesack.

#### Masonry, &c.

Close, Staindrop	£343 2 7
Walker, Cockfield	234 10 0
CHAPMAN BROS., Butterknowle (accepted)	229 0 0

#### Joinery, &c.

Fawcett, Staindrop	156 11 4
WILKINSON, Copley (accepted)	128 0 0

### CARDIFF.

For Making Alterations, &c., to the Old Cardigan Arms, Bute Street, Cardiff, for Mr. Helliwell. Mr. S. ROONEY, Architect and Surveyor, Cardiff.

PRICE (accepted) £300 0 0

### DARTFORD.

For Alterations and Additions to London and County Bank Premises, Dartford. Mr. W. G. BARTLETT, Architect. NAYLAR & SON, Rochester (accepted). £2,637 0 0

### DUDLEY.

For Construction of Engine and Shed, &c., for Dudley and

Stourbridge Steam Tramways.

Biggs, Birmingham	£3,344 0 0
Knight, Walsall	2,700 0 0
Garlick, Birmingham	2,500 0 0
FELT, Leamington (accepted)	2,500 0 0

### EASEBOURNE.

For Works to Casual Wards of the Midhurst Union Workhouse, Easebourne. Mr. EDWARD EAMES, Architect, Midhurst.

Knight & Son, Midhurst	£62 5 0
Baker, Midhurst	58 6 9
Till, Midhurst	55 0 0
Heighes, Elsted	46 5 0
MILLS, Midhurst (accepted)	45 0 0

### FORRES.

For Construction of Pavilion, with Boundary Walls, Gate, &c., Forres. Mr. J. MILNE, Architect.

Milne, brickwork	£113 17 0
Duncan & Duff, masons	30 0 0
M'Pherson, joiner	70 5 0
Layton, plumber	14 8 9
Munro & Son, ironwork	30 15 0

### GREAT CROSBY.

For Building Mortuary and Disinfecting Store, Great Crosby. Mr. ISAAC DIXON, Local Surveyor and Architect. Quantities by the Architect.

Harrison, Seaford	£348 0 0
Arcy & Co., Liverpool	323 12 0
Sawyer, Waterloo	289 0 0
Roberts, Waterloo	278 0 0
MULLHOLLAND, Great Crosby (accepted)	290 0 0

### HALIFAX.

For Construction of Pipe Sewer, St. James's Road, Halifax.

Bottomley	£30 0 0
Hudson & Kitchen	37 0 0
Brook & Son, Halifax	29 9 0
Dewhurst	26 5 0
Mann & Sutcliffe	26 2 0
Mann	22 0 6
TYSON (accepted)	21 19 0

### KING'S LYNN.

For Erection of a Villa Residence and Offices in Goodwin's Road, King's Lynn. Mr. EDWARD J. COLMAN, Architect.

Brown	£613 0 0
Jarvis	545 19 0
Bardell Bros.	545 14 8
Leach	513 13 0
WANDFORD (accepted)	512 10 0

### LONDON.

For Repairs and Alterations to No. 67 Atlantic Road, Brixton, for Mr. H. J. Mash. Mr. ALFRED WRIGHT, Architect and Surveyor, Belgrave House, 190A Brompton Road, and 18 Hayter Road, Brixton Rise.

Crabb & Son	£255 10 0
Marland	211 0 0
Peacock Bros.	198 15 0
Smith	197 10 0

For Supply of Manhole Covers, Gully Gratings, &c., for the Hackney Board of Works. Mr. JAMES LOVE-GROVE, Surveyor.

Durham Bros., Bow	£368 15 0
Seager, Faversham	358 0 0
Badham & Co., Holborn	350 3 0
Thames Bank Iron Co.	340 1 0
Phoenix Foundry Co., Derby	332 18 0
Bird, Regent Street	310 10 0
East Surrey Co., Croydon	305 14 0
Edie, Bow	304 9 4
Smith, Patterson & Co., Blayden-on-Tyne	303 4 2
Blackhurst & Thomas, Hereford	299 17 6
Thorncliff Iron Works, Sheffield	287 14 6
Langley Mill Co., Nottingham	281 10 0
Balls, Garrett & Co., Maidstone	276 10 0
Rammage, London	264 9 0
Jukes, Coulson & Co., London	253 4 6
RICHARDS, Leicester (accepted)	200 14 0

### LONDON.

For the Erection of a Lecture Hall on the Site of St. John's Church and Parsonage, Lewisham High Road, S.E. Mr. JOSEPH CLEVER, Architect. Quantities by Mr. Henry Bradley.

Hodson	£1,150 0 0
Steel Bros.	1,135 0 0
Woodward	1,099 0 0
Greenwood	1,076 0 0
Staines	1,074 0 0
Kilby & Gayford	1,045 0 0
JERRARD (accepted)	1,044 0 0
Kennard (withdrawn)	986 0 0
Surveyor's Estimate	1,100 0 0

For Engineering Works at the new Infirmary, Harrow Road, Paddington, W., for the Guardians of the Poor of Paddington. Messrs. A. & C. HARSTON, Architects 15 Leadenhall Street, E.C.

Contract No. 1.—Laundry Machinery and Fittings, Steam Boilers, Engine, Hydraulic Lifts, &c.

Fraser & Co.	£3,394 0 0
Bradford & Co.	3,321 0 0
Clements, Jeakes & Co.	3,209 7 0
BENHAM & SON (accepted)	3,100 0 0

Contract No. 2.—Kitchen and Scullery Fitting.

Clements, Jeakes & Co.	£632 0 0
Benham & Son	580 0 0
Bradford & Co.	566 0 0
FRASER & CO. (accepted)	535 0 0

Contract No. 3.—Tanks, Mains, and Hydrants, Sanitary Fittings, Hot and Cold Water Services, Hot Water Warming, &c.

Clements, Jeakes & Co.	£3,785 17 6
Clark, Bunnett & Co.	3,487 0 0
Rosser & Russell	3,123 6 0
STIDDER & CO. (accepted)	2,750 0 0

### NORTH SHIELDS.

For Additions to Eastern Board Schools, North Shields.

Mr. F. R. N. HASWELL, F.R.I.B.A., Architect.

Bolton	£956 0 0
Shotton Bros.	921 19 8
J. & W. Simpson	905 15 0
Elliott	898 0 0
Fishburne Bros.	865 10 0

### NOTTINGHAM.

For Building Fire Station adjoining Police Station, Mansfield Road, Nottingham. Mr. ARTHUR BROWN, C.E., Architect. Quantities by the Architect.

Jelley	£277 8 0
Wartnaby	234 0 0
Fisher, Hutchinson & Ashling	214 0 0
Middleton	210 0 0
Bell & Son	201 11 11
HODSON (accepted)	195 0 0

For Pulling Down Old Premises and Building New Ones, forming part of Mr. Bach's Mourning Warehouse, Long Row, Nottingham. Messrs. TRUMAN & PRATT, Architects, Long Row, Nottingham. Quantities by the Architects.

Osborne	£420 0 0
Crosby	358 2 8
Grundy	356 0 0
Paul	312 0 0
Vickers	310 0 0
Brown & Son	305 0 0
Wheatley & Maule	303 0 0
Bains & Surton	300 0 0
FISH & SON (accepted)	279 0 0
Jesson, Wade & Gray	275 0 0
Clarke & Lucas	267 18 6
Killer	260 9 0

### SOUTH SHIELDS.

For Street Improvement Works, South Shields. Mr. MATTHEW HALL, Borough Engineer.

Craig, South Shields	£1,136 8 4
Wilson & Walton, North Shields	1,060 4 7

For Works in Formation of Recreation Ground, South Shields. Mr. MATTHEW HALL, Borough Engineer.

Currey & Co., Whitley	£1,820 16 8
Atkin & Co., South Shields	1,437 10 0
Murphy & Co., South Shields	1,160 0 0
Simpson, Newcastle-on-Tyne	1,054 3 4
Moir, Ryhope	1,010 10 0
King, South Shields	958 0 0
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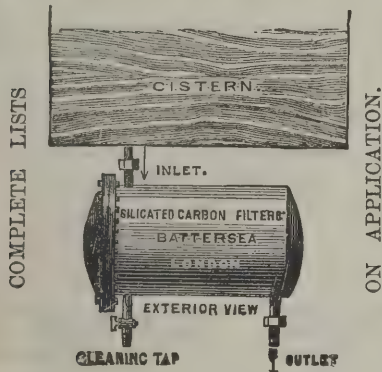
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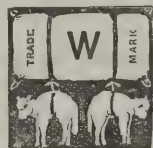
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# The Architect.

## MEMORY-DESIGN.



It was a principle of some importance which Mr. BERESFORD HOPE referred to in his address at the Architectural Museum last week, when he spoke of the distinction between artistic work which is done from memory and that which is done otherwise. The difference in the result, as the act of designing now goes, may not be very clearly discernible. Design, at least of the ornamental order, has for its chief qualities, first, authenticity of style; secondly, harmony of style; and thirdly, what there may be of special or personal grace. The first is to be derived from a study of "the authorities," the second from their proper appreciation, and only the third from something apart. Instances are abundant wherein the very best art-work of its kind belongs entirely to the authorities. Mr. BERESFORD HOPE has all his life been magnifying this kind of work. He may be said to have been an advocate of authenticity universal and eternal. Art with him has been the rehabilitation of the past or nothing; and this not only with reference to the mediæval modes which personally he has loved so devoutly, but scarcely less whenever his approval has been incidentally conquered for a passing moment on behalf of either the academical relics of antiquity or the fugitive efforts of modern times. Architects and their allies of the drawing-board have had no more exacting critic than he in the direction of an absolute surrender of independence to authority. It must be especially gratifying, therefore, to those who from time to time, in one way or another, have been subjected to his rebuke for an unseemly exercise of "originality" to find that he has on reflection become at last a little less severe. The fact is that the authenticities are losing their influence in the world; and in such circumstances a really observant and thoughtful if dogmatic amateur like Mr. BERESFORD HOPE may still be expected to come forward as a pioneer of change.

The teaching of design has in many ways been made the subject of earnest discussion amongst us; one class of persons affirming, as a mere axiom of its philosophy, that art cannot possibly be taught; and others arguing that, all axioms to the contrary notwithstanding, it somehow or other must be learnt. The difference is manifestly verbal rather than real. No one who knows what the practical work of designing is would ever seriously assert, either on the one hand that the imagination is a faculty to be acquired at school, or on the other that the power of using it can be attained without schooling. The question of Memory-design is, therefore, one of schooling. Whether this may be instruction at the hand of a master, or exercise under self-guidance, is immaterial; it is that actuality which is acquired by education, as distinguished from the potentiality due to native fertility of fancy, which alone is in view. And so the point comes to be this: How far is the student of design liable to have his designing faculty cramped by too exclusive an adherence to the custom of copying examples—say the best examples—and how far may he expect to find his designing faculty freed from restraint if he adopts some other means of exercise? Mr. BERESFORD HOPE's doctrine is that the student should combine with the copying of standard examples an exercise that may be called committing them to memory. This does not, perhaps, go very far philosophically, but the principle is clear enough, so far as it goes, practically.

No doubt there are many ornamentalists who may be said to be almost helpless without a copy. Even amongst architects, with whom it might be thought that, except in the case of a church, which is a subject *sui generis*, no copy could now be of much use, it is notorious that some of the best men will never trust themselves to put pencil to paper without previously looking through their collection of examples. They say it is for the sake of inspiration, and so let it be; but what is now suggested is that this inspiration would come more freely if the examples were stored in

the memory instead of the portfolio or the bound volumes of a professional journal.

There are some who will still prefer to say that it is general principles that ought to be thus introduced into the storehouse of the mind, and not a mere accumulation of specimens—principles to set the fancy going rather than precedents to control it. But this may be so, and yet the doctrine before us remain unassailed. It may not go very far, as we have already said, but it goes at least to this extent—that the study of examples, as unquestionably an essential branch of an artist's education, may be the more effectively pursued by now and then turning the copy to the wall and reproducing it from memory. We need not hesitate a moment in recommending this happy thought—whether original or not, it may be at least new to many—to the attention of all art-students who would cultivate freedom, whether of hand or of head.

## RECENT EXCAVATIONS IN THE ROMAN FORUM.

By R. P. PULLAN.

THOSE who have not visited the Roman Forum for the last two or three years will now perceive a wonderful change. The two roads which ran across it—that in front of the Arch of Septimius Severus, and that which extended from the Temple of Antoninus and Faustina, have been removed, and the whole space as far as the church of St. Francesca Romana has been excavated, so that the spectator, standing in front of that church, has an uninterrupted view, comprising the whole of the Forum and the Via Sacra, as far as the Arch of Septimius Severus. This is not all. The wall of the Palazzo Farnesini has been removed, and the space it embraced on the north of the Palatine Hill has been almost entirely excavated to the level of the Forum. I say almost entirely excavated, because a large body of men are now hard at work removing the last masses of earth which cover the extremity of the house of the Vestal Virgins.

When the work now in progress is completed there will be a complete city of ruins, extending from the Capitol to the Colosseum, within a city of modern houses—an ancient jewel of great price in a setting of modern workmanship, to use a simile employed by Signor BACELLI, the enlightened Minister of Public Works, to whose energy and antiquarian knowledge the great undertaking of laying bare the principal edifices for the benefit of scholars is chiefly due.

The discovery of the site of the house of the Vestal Virgins is one of the most important ever made in the Forum. It was known that this building, which was situated in the Regia given to the Vestals by AUGUSTUS, was in the vicinity of the church of Sta. Maria Liberatrice, because when that church was built (A.D. 1546) pedestals of statues with inscriptions on them relating to the Vestal Virgins were found in digging for the foundations. These pedestals have been unearthed, and remain in the position in which they were found. But neither the position nor the dimensions of the house could be then ascertained. It is now certain that the house of the Vestals consisted of an open court, extending in length from east to west from a point opposite the east side of the Temple of Faustina to a point opposite the east side of the Temple of Romulus, on the opposite side of the Forum. As far as can be ascertained in the present stage of the excavations, this court had a porticus all round it, supported by columns and pilasters, the foundations of which are *in situ*, so that a restoration will be an easy matter. The space enclosed by the walls of the court appears to be about equal to the inner part or court of the Basilica Julia. At the east end of the court is a tablinum, approached by four steps between the columns, which remain in position to a height of about 4 feet. This tablinum has a waggon-headed roof; it is a parallelogram of two squares in plan, and has three small arched chambers on each side. The floor of one of these chambers has been in part removed, and under was a series of half-earthenware jars, probably for the purpose of keeping the floor dry. Another of these chambers is used for the purpose of storing various fragments of sculpture found during the excavations, amongst which are the heads of some of the Vestals. The court is bounded on two sides by wide corridors, from which there are several chambers, evidently the residence



of the Virgins. The whole building, the walls of which vary in height from 6 feet to 30 feet, is of massive brickwork of the third century. The walls of the court have been lined with marble; those of the corridors and chambers have been painted on stucco. A small portion of the painting remains in the south corridor. The statues of the Vestals stood upon pedestals adjoining the wall of the porticus on the sides. Most of the pedestals were found in position: the statues were thrown down. One or two are found every day. When I visited the ruins last week there were ten, now there are fourteen either tolerably perfect or in pieces. All but two are headless. The most perfect wears a veil over a close-fitting cape or coif, and holds in her left hand a bunch of poppies and ears of wheat.

This house—or Atrium of the Vestals, as it is called by ancient writers—was probably erected after the destruction of an earlier edifice by fire in the middle of the third century, all the dedicatory inscriptions on the pedestals being of a later period. As may be supposed the style of the sculptured figures is not of very high character, and they vary in scale from 6 feet to 4 feet in height. In front of the tablinum there is an impluvium about 10 feet square; in this were found several fragments of sculpture.

The general level of the Atrium is four steps above the level of the Forum, near the so-called Temple of Vesta. I say so-called, because the excavations have just partly uncovered the base of an octagonal edifice, of the full width of the court, which may possibly prove to be the base of the true Temple of Vesta, which, we may naturally suppose, stood within the sacred temenos.

Between the house of the Vestals and the foundations of the Palace of Caligula a paved road, leading by a gentle ascent almost parallel to the Via Sacra on the other side of the Forum, towards the Arch of Titus, has been discovered. It can be no other than the Via Nova. This being considerably above the level of the house, is approached by a flight of steps at the back of the chambers, near the south-east end of the court. Arches at intervals span the road supporting the foundations of the palace. The intervening spaces below the palace have apparently been shops. The pavement of the lower part of the road adjoining the church of Sta. Maria is chiefly composed of nether mill-stones, and there are several portions of similar stones built into the wall of one of the shops. In a few weeks' time the excavation of the interior of the porticus will be completed, and the full extent of the edifice ascertained.

The wall of the garden east of Vignola's Gate has been already demolished. The gate itself, which is one of VIGNOLA's *chefs d'œuvre*, is to be carefully removed, the stones being marked so that it can be erected on another site. The excavations here and elsewhere are being carried on most vigorously, and it is to be hoped that the present active Minister may remain in power long enough to carry out his magnificent projects. The transformation of the Forum from what it was when I first saw it, more than twenty years ago, is astonishing. Then the Basilica Julia and the temples near the Capitol alone were laid bare; now almost every building that adorned the Forum has been excavated, and a vast field has been opened for the speculation of antiquaries, who seem determined not to agree as to the site of any one edifice, unless its position be authenticated by inscriptions like that found in the house of the Vestal Virgins.

## BRITISH OLD MASTERS.

THOUGH the British contingent to the ranks of Old Masters within Burlington House is strong by virtue of quality, there are entries of names which have no adequate representation, and might as creditably be absent. For to slip in minor pictures by the men who link the past and the present of the English school—LESLIE, LANDSEER, CRESWICK, and the like—adds no lustre to repute of painters or standard of exhibition. There are a few curiosities in the collection, the value of which lies in their reflex of the opinions or manners of the day, rather than in art merit. For example, one of the pieces of dramatic portraiture for which the German Academician, ZOFFANY, was famous—*Macklin as Shylock*. In face of modern Shakesperian revivals this impersonation of the trial scene in "The Merchant of Venice," with the performers

in the dress of the period, towards the end of the last century, and old MACKLIN swaggering like an irate pork-butcher, with a horrible grin on his face and a carving knife in his hand, an undignified effigy in knee breeches and stockings, what a grotesque contrast it presents, what an astonishing gulf between the attitudes towards the SHAKESPERE drama of the then and the now! ZOFFANY's dry mannerism, that knows no grace, of course increases the ludicrous effect of this apparently drawing-room performance of an actor so celebrated in his day as to have been praised by POPE. The domestic scenes of WILLIAM HOGARTH, great artist as he was, are apt to affect one's risible nerves. The *Music Piece* (22), and more especially the *Breakfast Piece* (38), with the family party and the learned doctor, and the servant attending to the teapot, have such a quaint formalism in their trenchant homeliness; the people have their best manners so obviously upon them, and seem to be addressing one another in set phrases for the benefit of the spectator, as in a scene from genteel comedy on the stage. This "breakfast-piece" is presented by the executors of the late Rev. WILLIAM FINCH to the National Gallery, and should be welcome as an excellent example of this phase of HOGARTH's work.

To turn from such quaint formalisms to the portraiture of the triad, REYNOLDS, GAINSBOROUGH, and ROMNEY, is like losing a fit of the cramp. We pass at once into a company which, if courtly, is easy, where the nearest approach to caricature is an exaggeration of *naïveté* or a touch too much of languid grace, or, maybe, a little superfluous dignity. Even when painting the strange head of the historian *Edward Gibbon*, with its curious likeness to a pug dog, with the capacious brain, the insignificant, turned-up nose, small choleric mouth and rolls of fat chin, REYNOLDS escaped the grotesque. So he did when he painted *Dr. Johnson*, though he caught the great lexicographer's ungainliness to the full. The Academy exhibition has secured some of the best men's portraits by REYNOLDS—strong work with depth of colour and incisive character. It has gained too for itself, and lost for the Grosvenor Gallery, the exquisite *Mrs. Sheridan as St. Cecilia*, and the Marquis of LANSDOWNE's replica of *Miss Morris as Hope Nursing Love*—perhaps the picture most studious in line and form of any that the painter produced. *Lady Lade*, on the other hand, is after a playful, offhand manner, all charm and flutter, in which there is an approach to GAINSBOROUGH's happiest sketches. Between such art-concealing art and the smooth graces of the forerunner of these men, PETER LELY, there seems no immediate link, and yet the VANDYCK tradition did doubtless pass down by way of the showy painter of CHARLES II.'s showy beauties. A sumptuous example of LELY's well-studied draperies and beautiful broad technique, also of a certain luxurious dignity which he could impart to women's portraits, is the figure of *Eleanor, Lady Byron*. The courtly painter has suggested the impersonation of a St. CATHERINE by the introduction of a wheel, which looks like a drawing-room ornament, and by setting a palm-branch in the lady's hand, while the cherubs, holding a flower crown over her head, do not care to conceal that they are cupids of the most frivolous disposition.

ROMNEY's *Mrs. Maxwell* looks elegant simplicity itself after such spurious sanctity, and is besides one of the painter's best painted and most charming full-length portraits. No one makes so much out of a simple white gown as ROMNEY; it seems in his hands the most appropriate garb for a lovely woman. GAINSBOROUGH treated white with less frankness; but we see in *Mrs. Douglas* how deliciously he could work it into a scheme of greys. This portrait, again, is a *cap' opera*, so fine is it in line, and instinct with that delicate intelligence in the head by which, to our thinking, GAINSBOROUGH often surpassed the beauty-loving REYNOLDS.

The representation of the British school of landscape has not the significance of some previous seasons when TURNER and the Norwich school have been in force; nevertheless a very interesting sequence of examples has been gathered. Here are no less than eight pictures by RICHARD WILSON, R.A., none of them in his most ambitious vein or scale, except the *Falls of Tivoli* in the large room, but several of delightful quality. The old-fashioned idealist in landscape has an immortal charm, let the modern tongue disdain him as it may; these ordered Italian scenes or English river-sides are steeped in quiet poetry; the impression they leave is as complete in its deliberate generalisation as from any blurred piece of audacious suggestion from a Paris *atelier* of to-day. Here are two little pictures of the *Lake of Nemi* (Nos. 27 and 57), which



have power to awaken the sweetest of Italian memories. From WILSON to ALEXANDER NASMYTH is to lose much and to gain a little. *Glencoe* has some prosaic boldness in the treatment of the twin-crag and deep mountain pass. A nice little landscape study of cattle standing in a stream beneath tall trees hangs not far off, and claims to be by good JOHN CROME. It has less of his *cachet* than usual, not a bit of loaded making out in it. The sketch for the picture of *Salisbury Cathedral*, by CONSTABLE, is as plucky a piece of work as need be, full of tone and mastery in the blotted free touch and silvery gleam of the Gothic pile rising in the distance. To place such a sketch in such a frame as disfigures it is a mistake unworthy of the discriminating owner, Mr. LOUIS HUTH. There is a delightful specimen of the one English landscape-painter whom France long ago chose to honour, because he worked on French soil and assimilated French art, RICHARD PARKES BONINGTON. It is, however, to no Frenchman but to English TURNER that he approaches in Mr. T. O. BARLOW's *French Coast Scene*, with its lift of hazy rain cloud and gleaming lights over sea and sandy reach. Three pictures claim the name of TURNER—*The Nore*, from the Earl of ESSEX, an accredited and signed composition of angry wave and storm, with fishing-boats and shipping beating about, date 1808. The others are both lent by Mr. H. DRAKE, a little *Seashore*, very luminous and tender, and a larger canvas, *Fishing Boats entering Calais Harbour*, which is doubtless a genuine picture, powerful in the drawing of wave and cloud, if somewhat opaque and slaty in quality and ridgy in touch. The impetuous push and drive of the heavy sea against the pier is splendidly given, and has the true mastery about it. Last, let us not pass by the canvases of "CATTLE WARD," whether he lose his own balance in an attempt to depict *The Fall of Phaeton*, or touch repute and terra-firma in a capital study of *Dalmatian Dogs*, which the knowing in canine breed declare to be faithful in form and hair, while the uninitiated art critic can detect the firm, large draughtsmanship, the solid, if dry, painting of the coats, and the careful accuracy in head and foot.

### ARCHITECTS AND THE DWELLINGS OF THE POOR.

A LETTER has been recently addressed to the secretaries of the Institute of Architects by Mr. MARK H. JUDGE, whose name is known in connection with various public enterprises more or less related to architecture, and who is a member of that body, suggesting that the problem how to house the poor in London and other great towns, being now one of the urgent questions of the day, should be taken in hand by the Institute; it being impossible, he argued, that any adequate practical solution can be arrived at without that particular kind of aid which professional architects alone are competent to afford. We commend this proposal to our readers, and heartily endorse the argument upon which it is based.

True to its present policy, the Council of the Institute, intercepting Mr. JUDGE's communication as a matter of its own private business—one of the "affairs" of the Society which it is the prerogative of the Council, according to the new doctrine, to "conduct"—promptly dealt with it, and by means of a sort of syllogism snuffed it out. The logical formula is worth quoting. "A generation ago," say the secretaries in their reply, "a member of the Council made a noble effort" in connection with the subject; and "persons in authority, just awakened to the facts, may perhaps be astonished" if they will inquire about this. Therefore "the means at the disposal of the Institute are too small," and so on; and Mr. JUDGE is not even referred to some other professional organisation, such as the Architectural Association, the Builders' Society, or the Society of District Surveyors, whose means are larger. It has to be explained that the good work which the Council takes credit for, as having been done by one of its members, is the earnest literary labour so long devoted to the cause of sanitation for the humble by Mr. GEORGE GODWIN; and if the connection between this and the operations of the present governing body of the Institute of Architects should not be at once apparent, it must be further explained that Mr. GODWIN, having "a generation ago" served as a vice-president under Earl DE GREY, is an honorary "member of Council" for ever under Mr. HORACE JONES and his successors, not

expected to attend the meetings, and not allowed to vote. Therefore his work is the work of the Council.

Perhaps, however, this kind of reply to Mr. JUDGE's letter may have been but one of those instinctive secretarial pleasantries which sometimes do so much to relieve the tedium of official administration; but at any rate we certainly must take leave to express our regret that the Institute should lose a chance for manifesting in these businesslike days a disposition to take its share in public business. Architects as a profession have been somewhat severely handled on behalf of the public for a good many years. It has been freely argued that they are pleasing picture-makers, sentimental antiquaries, learned and pious ecclesiologists, and many other honourable but futile things, rather than the practical and ingenious contrivers of common house-building whom "the British public" desire to have at command. It is seldom that any opportunity occurs for the plain, sound building-men of the profession to come forward to show the fallacy of all this. Mr. JUDGE, we repeat, is quite right in pointing out that, in the solution of the problem now attracting so much attention, those building-architects must supply an indispensable element. The only doubt about the matter seems to be how to bring the right class of men forward.

We cannot on any account admit that the Institute is not the proper professional body to take the lead. We are in hopes that the Council, now that the members at large have begun to claim a little more interest in their "affairs," may yet be induced to take the initiative, however formally. But there is one other body to which we think the appeal of Mr. JUDGE might be transmitted, namely, the Association of District Surveyors. There are more than sixty of these official architects distributed over London in the daily discharge of important duties of supervision relating to building. Not only every new house that is erected, but every old one that is altered, every one that is involved in neighbouring operations, and especially every one that is complained of as being in an unsatisfactory condition, has to be carefully attended to by those functionaries in minute detail. It is not too much to say, therefore, that the structural aspect of the problem before us, and the structural statistics which bear upon it, in the widest sense of the term "structural," must be familiar to the sixty district surveyors of London as a body, in such a way that their collective opinion would be of the utmost value upon whatever point they might be induced to consider, and certainly amongst the rest upon the question how to deal with the slums of London as a whole in a perfectly practical manner. If the Council of the Institute should still persist in rejecting Mr. JUDGE's well-meant proposal, we hope the district surveyors will take it up; but we should much prefer to see the matter submitted to them by the Institute, for the sake of the Institute's credit with the public.

### PARIS NOTES.

A PETITION has been sent to the Senate from MM. Gérôme, Carolus Duran, Boulanger, Baudry, Duez, Roll, Guillaumet, Gerola, Thomas, Lansyer, Guilbert, and other French artists in favour of M. Bardoux's Bill establishing certain guarantees for the property of artists in their work.

At last week's sitting of the Académie des Beaux-Arts, under the presidency of M. Guillaume, M. Chaplain read a paper on the life and work of his predecessor, M. Getteaux. M. Guillaume was appointed a member of the Committee for the Prix Fould, value 20,000 frs., given for the best work on the "History of Design."

In the competition for the design and execution of the statue to be raised to the Abbé Grégoire at Lunéville, the jury awarded the first prize to M. Charles Elie Bailly, who will carry out his project. MM. Laurent and Johann, who came second and third, received 1,000 and 800 frs. respectively.

A new gallery to be devoted to modern French pictures is being prepared at the Louvre in the large hall known as the Salle des Etats, formerly constructed for the sovereign to receive the two Chambers at the opening of the Parliamentary session, and which has been lately given up to the administration of the museum. The principal rooms at the Louvre being occupied by



the works of the old masters, those of the modern French school, when removed there from the Luxembourg after the death of the artist to make room for the works of contemporary painters, have to be placed in small, crowded, and badly-lighted rooms in the upper storeys, rarely entered by visitors, and where they are quite lost sight of by the general public. Thus literally stowed away are some of the best works of Ingres, Ary Scheffer, Delacroix, Delaroche, Horace Vernet, Daubigny, &c., that certainly deserve to be made more accessible. The task of appropriating the Salle des Etats for its new destination will, however, occupy some time, and it is scarcely probable that the new gallery will be ready before the beginning of next year. The old roof of the hall, which is about 135 feet long by 63 wide, has already been removed and replaced by glass skylights.

The Administration of Fine Arts have decided during the present year to complete the restoration of the Château de Pierrefonds, taken in hand fifteen years ago by the late Viollet-le-Duc. The cost of finishing the work of restoration is estimated at 100,000 frs.

An interesting discovery of decorative paintings has been made in the old palace of Cardinal de Rohan in the Rue Vieille-du-Temple, formerly known as the Hôtel de Strasbourg, and occupied since 1808 by the National Printing Office. A large room on the first floor, until recently used as a library, being cleared out for the removal of its contents to the storey below, it was remarked that the paper on the walls was adherent to canvas stretched along the sides from the ceiling to the ground. The removal of this paper brought to light a dozen panels, painted by Christopher Huet, representing the loves and games of Arcadian shepherds and their consorts, who are sporting in gardens amid flowers, birds, monkeys, and dogs. One panel only was missing, having been cut away for a door, but it was found in a loft, not damaged beyond restoration, while the others are in an excellent state of preservation. It may be noted that the National Printing Office was already known to contain many valuable works of art, among them being two landscapes by Boucher, signed and dated 1751; a superb Boule clock—much remarked at the 1878 Exhibition—and the remarkable bas-reliefs, cited in the "Historical Dictionary of Art" as "Un Phaeton groupé par le Lorrain," which is to be seen above the entrance to the old stables, having hitherto suffered but little from the weather. Altogether, the Imprimerie Nationale is well worthy of a visit from all art amateurs.

The published accounts, made up to December 31 last, of the subscription fund for the construction of the church on the heights of Montmartre, show that the sums actually received amount to 13,500,000 frs., and money is still coming in well. From the month of March the building committee has decided to increase the number of workmen to 500, a measure that will considerably accelerate the completion of the edifice.

The death is announced of M. Léon Noël, an artist who had made himself well-known by his lithographic reproductions of many masterpieces of the French school of painting.

According to the Paris *Rappel*, women, who have already succeeded in forcing the portals of the Medical School, are mounting to the assault of the Department of Fine Arts. A young American lady, Miss Laura White, has obtained entrance to the special school of architecture directed by M. Trélat. It has been ascertained that there are many women employed in the building trades, either as shop forewomen or managers of works. The fine carpentry work in the Passy Mairie was designed and executed by a lady, who is at the head of one of the largest decorating firms in Paris. Many other instances might be given of the solid footing now being gained by women in the field of construction; and again, to quote our Paris contemporary, "we may shortly expect to have women-architects, who, without doubt, will largely help to relieve, by their grace of idea and imagination, the somewhat dreary appearance and monotonous style of modern architecture."

The Committee of Historical Inscriptions have decided to place on the façade of the Chamber of Notaries, in the Place du Châtelet, a commemorative tablet, indicating that the building

occupies the site of the former Prison of the Grand Châtelet. To the tablet will be added a small model of the famous fortress.

A new school of design has just been opened at 19 Rue des Petits-Hôtels. It is intended specially to afford instruction in the application of the fine arts to such industries as ceramics; glass and enamel working; wood, marble, ivory, and metal carving; the design of fabrics; and decorative painting. The number of pupils is limited to 100, who will all be required to pass a preliminary entrance examination.

M. Taine, the Academician and Professor of *Æsthetics* and the History of Art at the Ecole des Beaux-Arts, has resumed his bi-weekly course of lectures before a very numerous audience. The subject of the present series is the history of painting in the Netherlands.

### THE ENGLISH FLOWER GARDEN.\*

THE flower garden has not been free from the influence of the revolutionary spirit that has been felt by things of more importance, and, as happens elsewhere, the tendency now is to introduce a close approximation to what is supposed to be dictated by Nature. For three centuries, if not for a longer time, it has been supposed in England that there should be a relationship—more or less close—between architecture and gardening, and the Anglo-Italian houses and gardens have been often laid out by one master mind. It would seem to have been the endeavour to permit as little contrast as possible between art and nature, and the terraces, fountains, lodges, &c., were the means adopted to allow the building to merge as it were into the garden, while the formalism of trees and hedges corresponded as far as was practicable with forms made of stone. We need not go further back than the end of the last century to see the hold which this artificial spirit had upon men's minds. Uvedale Price wrote several essays in the hope that he might dissuade people from adopting it, and he regards himself as a sort of forlorn hope in having to attack so strong an institution. In one place we find him suggesting that a "dressed lane" was not pleasing to a painter's eye; he pities "the poor pinioned trees of a gentleman's plantation"; and he goes so far as to assert that as despotism is the most complete leveller, so "he who clears and levels everything round his own lofty mansion seems to have very Turkish principles of improvement." William Kent had attempted a reform before Price wrote, but it amounted to little more than a change from squares and parallelograms to segments of circles and ellipses, from straight alleys and terraces to curved gravel walks. Capability Brown followed and acted on the principle of making a small parterre a model. As Price says, he "transferred its minute beauties, its little clumps, knots, and patches of flowers, the oval belt that surrounds it, and all its twists and crincum crancums to the great scale of nature." The clump was supposed to be the soul of a garden. So well was Brown's style recognised that once when he was high sheriff, and the attendants were straggling, a wag called out and advised him to "Clump your javelin men."

Although it was derided by many judges, what may be called the artificial system has always had admirers. So long as residences were Italian in style it was considered to be proper that the surroundings should also be Italian. Nor is it certain that the arrangement displayed bad taste. What is to be seen at Trentham, Thoresby, Highclere, and Clumber, among other places, is not without fitness. Mr. Robinsen, who is an enthusiast for the natural style, refers to the gardens at the Crystal Palace as evidence of the absurdities of the formal style. But the Sydenham gardens, when first seen, gained the applause of every gardener that saw them; and if they now appear in a condition that is suggestive of the yard of some bankrupt manufacturer of figures and vases in artificial stone, the cause is partly owing to want of money, and partly to a change in the public taste. It will be said that a garden need not demand so large a sum for its conservation, and there is much truth in the objection. A garden in any form is an expensive delight, and the Italian is of all forms the most expensive. But cost is not now the question. What we maintain is that the formal garden, call it Italian or what we will, has for centuries given delight to many men who were eminent for their good taste; and although there may be a change in fashion, there is nothing in that style of laying out ground which is intrinsically wrong. The garden with its fair columns, arches, and turrets which Bacon loved was formal, so was the garden which Descartes cultivated at Amsterdam during his exile, so were the gardens which made Cardinal Newman desire above all things to become a gardener in some great family. When Mr. Robinson asks, "What can we think of those who carry the dead lines and changeless triumphs

\* *The English Flower Garden: Style, Position, and Arrangement.* By W. Robinson, with the co-operation of many of the Best Flower Gardeners. John Murray.



of building and the studio into the garden?" we reply in the words of a man who was one of the best gardeners of his age, and who was one of the first to advocate the natural system, the poet William Shenstone, who said:—"A rural scene to me is never perfect without the addition of some kind of building; indeed, I have known a scar of rockwork, in great measure, supply the deficiency." Shenstone wrote in this way; not that he was an admirer of rockwork or builders' work, but he knew the value of contrast in gardening as well as in poetry, and felt that without its aid even natural forms will in time lose some of their charm. In his words, "Negligent of graces that have the merit of reality, we too often prefer imaginary ones, that have only the charm of novelty; and hence we may account in general for the preference of art to nature in our old-fashioned gardens."

There is a tendency in human nature to exalt one's opinion and to maintain that it alone is the truth; and in gardening there are infallible formalists and infallible naturalists, who condemn the system that is not their own. Why should it not be recognised that each system has merits, but inasmuch as a great deal depends upon the character of the ground, and of the house to which the garden is attached, one system is often more eligible than the other? Even rigid geometrical beds can have a charm, and in fact they are not more absurd than the laws of poetry, by which words are placed in certain fixed positions in order to gain effect. Mr. Carlyle was a poet by nature, but he held metre and stanzas in as great abhorrence as Mr. Robinson holds "oilcloth and carpet patterns" in flower-beds. Neither in one system or the other can judgment be dispensed with, and it is as easy to have a flaunting, vulgar garden on natural as on formal principles. If, like the late Dante Rossetti, we allow flowers and weeds to follow their own sweet wills, there will be a chaos after a few years that is not without picturesqueness; but, if we once seek after order, we cannot do it by halves. The wilderness in Rossetti's back-garden (and which is to be seen also in old-fashioned gardens that have been long unlet) was more pleasing than a great many costly examples of gardeners' skill.

We are not advocates of the formal system exclusively. The type of garden that, speaking generally, is best adapted for England would be one like Mr. Tennyson's in the Isle of Wight, which is described by him as "a careless-ordered garden." It would correspond with Shenstone's test of effect, which was to consider how a garden would appear if made the subject of a picture. The majority of English painters would select a natural garden, but occasionally there are men like Callcott and Dodgson who prefer some sort of architectural form as a balance to the wildness of nature. In doing so they but followed the example of Claude Lorraine.

Whatever system is adopted, there cannot be a better guide to the selection of flowers than Mr. Robinson's book. It may well be termed exhaustive. The flowers are arranged in alphabetical order, and comprise every variety that will grow out of doors in England. Mr. Robinson's taste is catholic in its comprehensiveness, and he finds use for flowers which might be termed "old-fashioned" and are despised by the fashionable florists. Even the sunflower has praise for its robust growth and commanding aspect. In every case full directions are given for the culture of the plant. The volume is illustrated by a thousand or more excellent woodcuts, in which the characteristics of the flowers are as well expressed as it is possible without colour. In the preparation of the book Mr. Robinson has had the aid of a great many flower-growers, and their united experience has resulted in a guide which on the subject is a library in itself.

### ST. MATTHEW'S CHURCH, IPSWICH.

THE following report on the condition of St. Matthew's Church, has been prepared by Mr. E. F. Bisshopp, architect:—

1st. South aisle and chancel aisle. The walls are fairly plumb. The unevenness visible in places in the south aisle I attribute to the walls having been too rapidly built at first, before the work had fairly time to settle. The outer face of these walls is in a decayed state, and the old cement stone here reused has become thoroughly rotten from the action of the atmosphere. The whole of the buttresses to this aisle are all more or less affected, many of the quoins have become detached from the rubble, and the stonework of same is much decayed. The quoins are insufficiently tied in, and the workmanship and material are of the poorest description. The fifth buttress shows distinct signs of outward thrust, caused by the arch dividing off the chancel aisle, and this is a serious matter, the construction of this arch being such that a very slight inclination of the abutments would inevitably cause it to collapse. The cement coping is weather beaten, and is cracked and in holes, and the stone coping to the chancel aisle is extremely decayed. The porch also needs repair to arrest serious mischief. The stonework of the windows is rapidly decaying.

The roof of the south aisle, as at present existing, is to be regarded with apprehension, and, I have no hesitation in saying, would become positively dangerous under a heavy load of snow. The timbers are extremely slight and meagre for such a span, and

they are, moreover, greatly weakened by the method of framing. The tie beams, which are supposed to take the weight, really do not perform this office, the whole of the load being thrown on to the purlins and intermediate principals; these are consequently sagged to such a degree as to cause the roof exteriorly to take the form of ridges and furrows. Under a serious strain the timbers would be likely to collapse between the tie-beams, leaving the latter intact. The boarding is an inch thick only. The slate—or rather slab slate covering—is very heavy, the slabs are about  $\frac{1}{4}$  inch in thickness, and from 2 to 3 feet square. The carved figures forming the bosses to the cantilevers are of high interest, being probably all that is left of the timbers of the old roof to this aisle. The figures are of oak of the date of the sixteenth century, of different designs, some bearing shields with the emblems of the Passion carved thereon. The roof timbers are in a fair state of preservation, though I notice in places they have been strengthened by irons.

With regard to the remedy of the defects mentioned above, I would advise that the heart of the walls of the south aisle be examined, and if proved fairly sound, the outer face might be skinned off, and the walls refaced in random flint and stonework, set in blue lias or Peterborough stone lime, well bonded in at intervals. The quoins to the buttresses to be renewed, and the latter cased up with similar facing, with Ancaster stone dressings and weatherings, and of a similar design to those of the north aisle. The fifth buttress before alluded to as showing signs of thrust, to be taken entirely down and rebuilt. The present parapet to be removed and others of a more worthy and lasting character provided.

The roof can be made safe and secure by the insertion of extra tie-beams under the intermediate principals, of like detail to present trusses, with struts therefrom up to the purlins, and the insertion of struts from the present tie beams to the purlins. Should the heart of the walls prove unsound, it will be a question whether to do the work above-named to the roof, and merely repair the present work outside (though in this case it cannot be made to last), or to contemplate a more serious reparation.

2nd. The tower presents no anxiety with regard to stability, being with the exception of the modern plaster-work and parapet, and other minor details, in a remarkably sound stage of preservation. The plastering which so defaces the upper stage, however, is in a bad state, and portions are liable to fall at any time. The coping also is split, and allows the water to percolate into the walls; the roof is not strictly water-tight, and the base of the tower and plinth thereto requires immediate attention. The stonework to the windows in the belfry is in a bad state, and in one instance, at least, quite unsafe. The date of the erection of the tower has been put at about the year 1400, but I am inclined to think that this is not early enough. The present outside facing is certainly not the original, the brick headers used in with the cracked flints and rubble being of quite different make and dimensions to the bricks on the internal face, which are very thin,  $1\frac{3}{4}$ -inch thick and 8 inches long, and are Roman bricks. The absence of buttresses, and rising as it does by stages, also are characteristic features of early towers. Doubtless originally an interesting window existed above the poor and modern west door, the present window having been inserted in its place at the time of the erection of the present south aisle, though the arches and inner jambs are left intact.

The wooden framework of the bells I believe touches the face of the walls in places through the crevices being filled up with dirt, and if so it requires attention. The staircase turret—added I should say early in the seventeenth century—is built partly of old Roman bricks. The removal of the plaster from the upper stage of tower will be a work of interest, as I am inclined to think beneath it may be found the original face and possibly some remains of early work; in this event my design might be modified. The windows in this stage are Early Perpendicular. The two lower stages are built battered inwards as much as 3 or 4 inches in the height of each, which of course adds to the strength of the tower, but the walls of the top stage are upright.

The design for the restoration of the parapet and upper stage, which I have the honour to submit herewith, shows the removal of the present modern parapet and the substitution of a battlemented stone parapet, with panel-work below it, in freestone and dressed flints, moulded string course, and gargoyles of Decorative style. I would propose to take up the leadwork of roof and relay it, taking the whole of the water away by a down-pipe on to the roofs on the east side. The face of the upper stage to be removed, if required, and the quoins repaired where necessary.

The Government have accepted the tender of a local contractor for the erection of the convict barracks, the governor's residence, and the warders' houses, at Dover, in connection with the new harbour works. The amount of the tender is 25,000*l.*, and the work is to be completed in twelve months. The contractor has already commenced to lay out the ground for the work, and it is calculated that, in order to carry it out within the time, it will require the employment of a staff of at least 300 labourers. Additional blocks of buildings will afterwards be erected by the convicts themselves.



## NOTES AND COMMENTS.

AN inquiry is to be made into the Architects' Department in the Irish Office of Public Works. We have more than once drawn attention to the anomalies of this department, which are not surpassed in any of the circumlocution offices. The Commissioners of Public Works have charge of very large building works, but from the formation of the Board not one architect has been appointed as a member. The architects are, in consequence, controlled by civil and military engineers. There has been a large increase in the architectural work, but the staff has not been increased in a corresponding ratio, and the members do not receive that recognition of their services which is their due. Architects who have charge of important public buildings are ranked as clerks of works, and it requires about fifteen years of service to entitle them to an increase of salary. All the defects of the department will never be brought to light until the inquiry into its constitution is partly undertaken by an architect. The work of the present inquiry will, it is understood, be conducted in private.

MR. FRANCIS HOLL, A.R.A., who died on Monday, had, like his father and grandfather, gained repute as an engraver, and it might even be said that there was a family likeness in their work. They were all at their best in engraving portraits, but they all produced large plates of historical subjects. FRANCIS HOLL, who was born in 1815, assisted his father, and his hand was employed on almost life-size copies of portraits in crayons by Mr. GEORGE RICHMOND, R.A., which in their peculiar style have never been surpassed. Mr. HOLL engraved the plate from *ELMORE'S Invention of the Stocking Loom*, which was first used as an Art Union plate, and then was presented as a prize to the purchasers of books in numbers, and the large *Railway Station*, after Mr. FRITH's companion to the *Derby Day*. His best plate is probably the *Paolo and Francesca*, after GUSTAVE DORÉ. His portrait engravings are very numerous. Mr. HOLL was well adapted to express faces of a soft, gentle kind rather than those marked by vigour, and hence he was always successful in his copies of the photographs of the late PRINCE CONSORT.

THE arrangements for the distribution of the funds—amounting to over 2,700*l.*—collected for the JOHN HENRY CHAMBERLAIN Memorial, have been approved by the subscribers. Four free scholarships in the Central School of Art will be awarded in alternate years, two to male and two to female students in the branch schools, preference being given to the children of artisans. The class fees will be paid out of the investment of the fund. The balance of the income derived from the investment will be appropriated to the maintenance and development of the Midland Institute, an institution which owes much of its success to Mr. CHAMBERLAIN'S fostering care.

THE creation of bishoprics which will disturb ancient landmarks has aroused the ire of Mr. E. A. FREEMAN. The custom from the earliest ages was, he says, to make the temporal and ecclesiastical divisions coincide. In several countries of Europe the ancient principle has been again followed by adapting the ecclesiastical divisions to the modern temporal divisions. With regard to the proposed diocese of Southwell, Mr. FREEMAN says:—"In all these matters it is often curious to see the weight given to mere sentimental antiquarianism, while the practical lessons of history are trampled under foot. Forty years ago the architectural majesty and ancient associations of Southwell Minster could not save it from degradation from the rank of a collegiate church. That rank it surely ought to have kept; but it is a grotesque absurdity, when a bishop is wanted for Nottinghamshire, to plant his bishop-stool in the village—it is hardly more—of Southwell, while the great town of Nottingham stands ready as the natural centre. The practical minds of the bishops of the eleventh and twelfth centuries, who shifted their sees from Crediton to Exeter, from Dorchester to Lincoln, would assuredly have been moved to scorn at such a scheme as this. Undoubtedly the great church of Nottingham is very far from being equal as a building to that of Southwell; but REMIGIUS or HUBART LASINGA would have settled that difficulty by building a church at Nottingham greater than either."

THE appeal to the City for contributions towards the expenses of the International Health Exhibition has been fairly successful. The Corporation have not only subscribed but paid over the sum of 5,000*l.*, and a further sum of 10,000*l.* is guaranteed. The following Livery Companies have already subscribed:—The Grocers' Company, 1,000*l.*, with a guarantee of 2,000*l.*; the Clothworkers', 200*l.*, and a guarantee of 300*l.*; the Fishmongers', 200*l.*, and a guarantee of 400*l.*; the Goldsmiths', 200*l.*; the Salters', 200*l.*, and a guarantee of 200*l.*; the Wheelwrights', 100*l.*, and a guarantee of 1,200*l.*; the Dyers', 105*l.*; the Joiners', 105*l.*, and a guarantee of 210*l.*; the Merchant Taylors', 105*l.*; the Saddlers', 105*l.*, and a guarantee of 210*l.*; the Skinners', 105*l.*, and a guarantee of 105*l.*; the Spectacle Makers', 100*l.*; the Coachmakers', 31*l.* 10*s.*, and 63*l.*; the Plumbers', 100*l.*; and the Horners', 25*l.* There are other companies who have yet to subscribe, and the delay retards the formation of the general committee of the exhibition.

A COLLECTION of drawings and photographs of some of the old buildings in Birmingham was exhibited this week at the conversazione of the Birmingham and Midland Institute. It was the work of the members of the archæological section, and the views were arranged by Messrs. J. A. COSSINS, PEARCE, and WILLIAMS. The collection was commenced in 1866, at a time when the Corporation projects for forming new streets threatened the destruction of much that was interesting as relics. The views are now invaluable. It deserves to be mentioned that the Corporation have likewise utilised photography in order that a record of the old streets which have been displaced may be preserved.

THE report of the "Old Mortality" Society, or National Association for Preserving the Memorials of the Dead, has some points of interest. The use of monuments is not always evident; for the majority of people are, as GRAY said, destined to be the prey of dumb forgetfulness, and the masons' craft cannot resist oblivion. But some tombs have acquired importance, and in these cases they deserve to be kept from ruin. Hitherto the committee of the Association have acted generally with discretion in selecting cases. No one would object to a little outlay on the tomb of one of the DIBDINS or on the grave-stone of Mrs. BRACEGIRDLE, the actress. But unless the monuments are interesting from their style, there is no reason why the public should care much about "Sir JOHN NEWTON, his wife, and twenty children," or a "Dr. HAMILTON" who died in 1812, or the father of a regicide, or some of the custodians of the QUEEN of SCOTS. The Council are considering the question of King HAROLD'S grave at Waltham; but in cases of this kind which are the subject of controversy it would be more prudent to be inactive. It is said that copies are being made of all the memorial inscriptions in the cathedral, churches, and burial-grounds of Norwich, and if this undertaking is carried out for all England the result will be appalling.

FOR some time past apprehension has prevailed respecting the future of Mont St. Michel and its buildings, priceless as relics of the past that it bears. A causeway, or dyke, was constructed about four years ago to connect the Mount with the mainland. In consequence of this barrier, the rapid tidal currents which prevail round the island are affecting the cliffs of the Mount itself, and so undermining the ramparts and buildings of the monastery. Such at least is the contention of some archæologists and artists, who demand the abolition of the dyke. M. ANTONIN PROUST, ex-Minister of Fine Arts, has taken the lead in this demand, and has brought the matter before the Chamber of Deputies by an interpellation addressed to M. RAYNAL, the Minister of Public Works. That gentleman affirmed in reply that the dyke was in no way the cause of the ruin with which the buildings on Mont St. Michel are threatened, but that on the contrary it was a generally recognised improvement. The reporter of the Parliamentary Committee, appointed some months ago to consider the question and fix upon the best measures to be taken for the preservation of the Mount, sided with M. RAYNAL; while M. DE DOUVILLE-MAILLEFEU created a diversion by expressing the opinion that the responsibility lay at the door of the Fine Arts authorities. The debate resulted in the adoption of the "order of the day," thus involving the rejection of M. PROUST'S motion for the removal of the causeway.

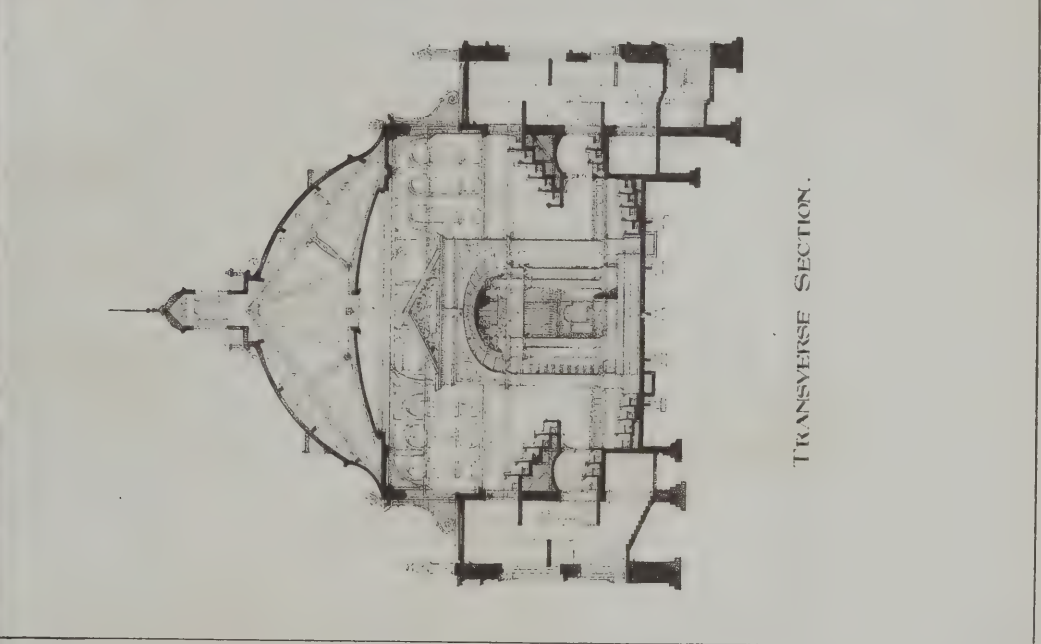
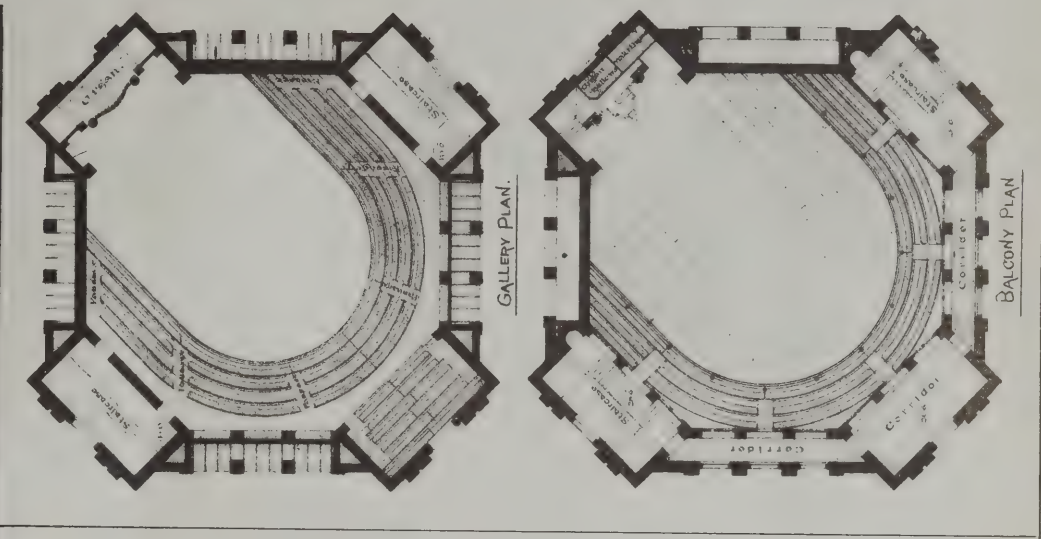
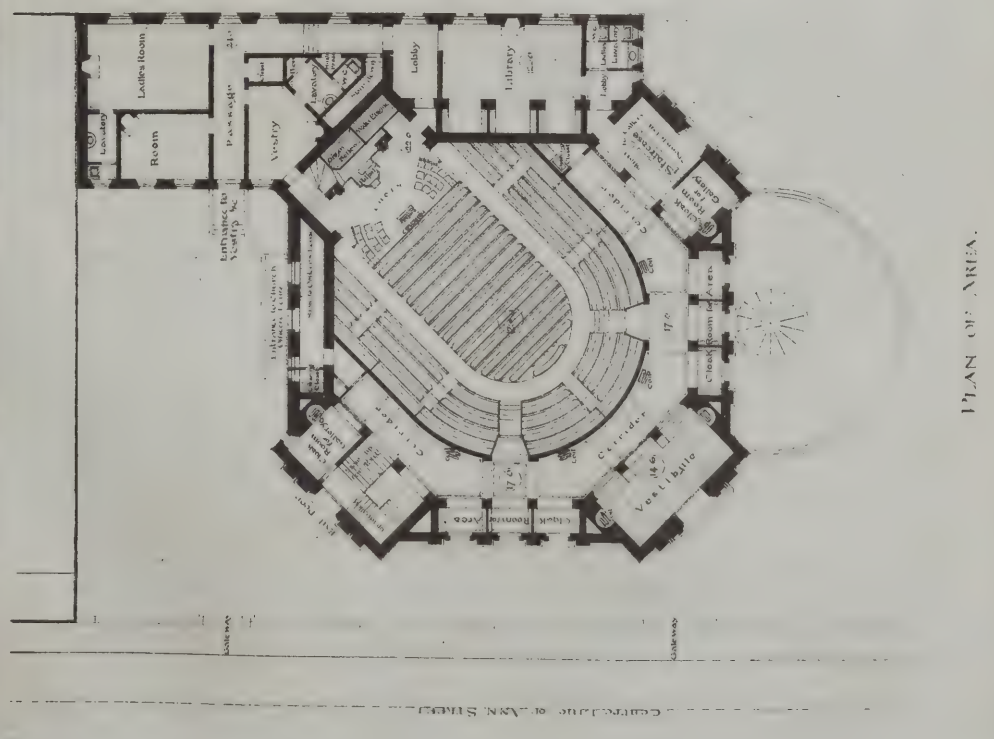
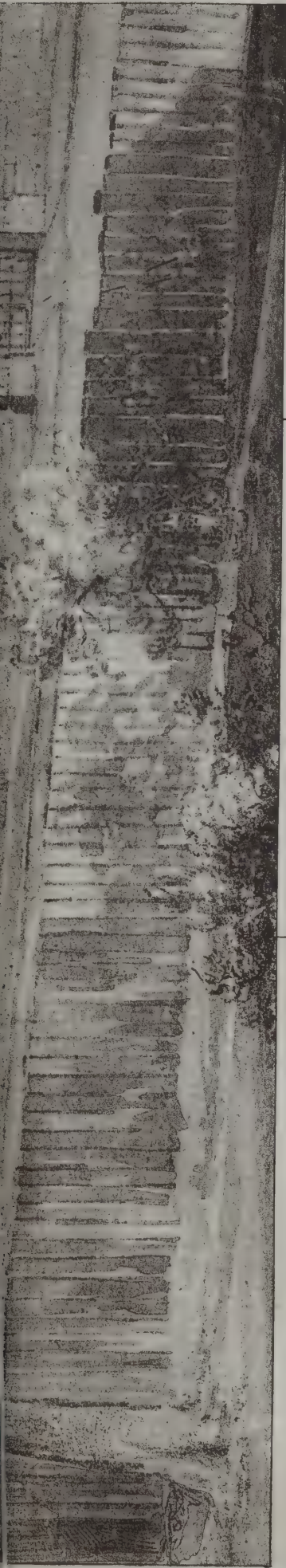












SKETCH DESIGN FOR A PRESBYTERIAN CHURCH, GLASGOW.

MESSRS CAMPBELL DOUGLAS & SELLARS, ARCHITECTS

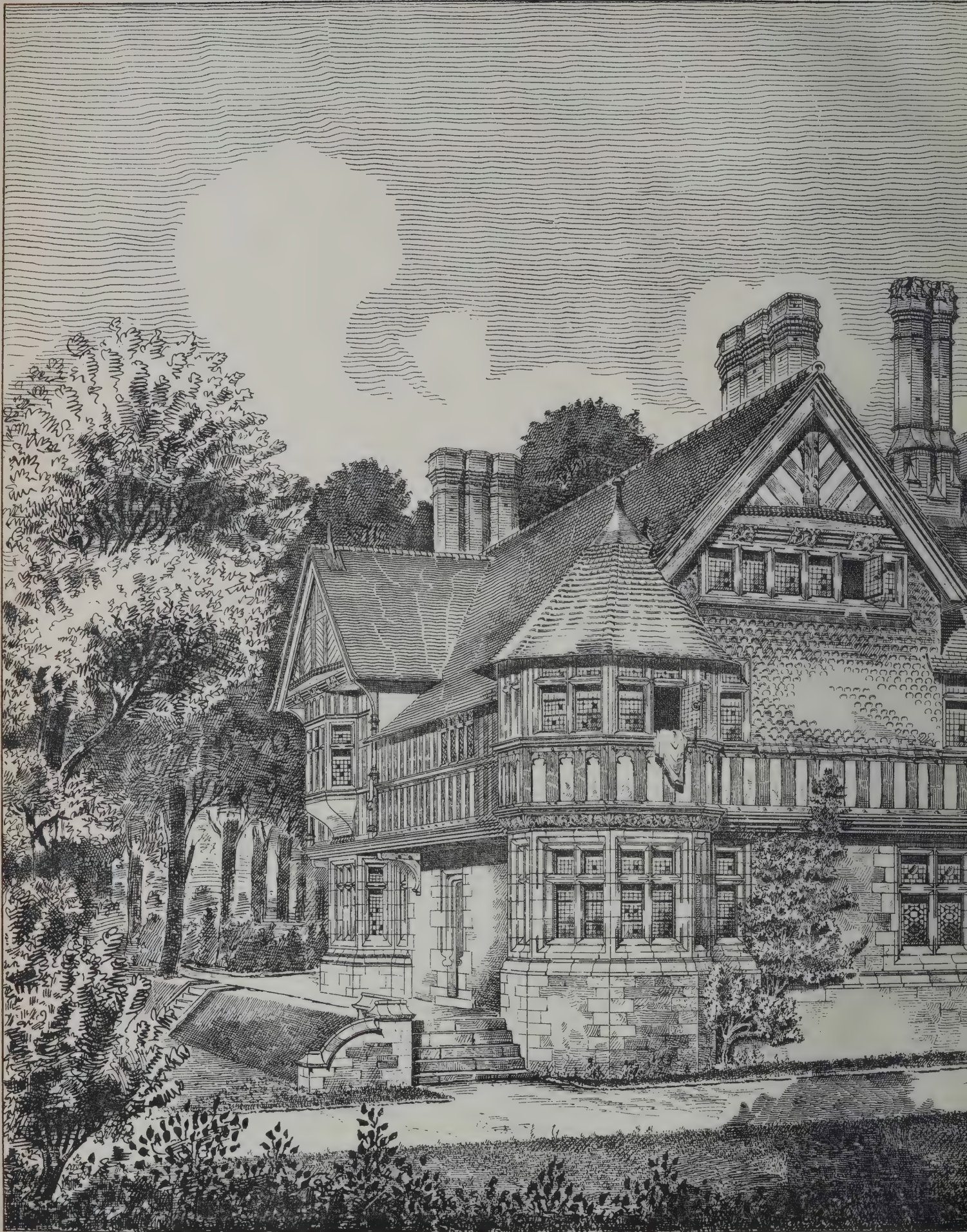












THE ME

MARK J. LANSDALL,



9 19<sup>th</sup> 1884.



RIDAMS.  
A.B.A. ARCHITECT

Engraved by J. G. Smith, London. Printed by J. G. Smith, London.

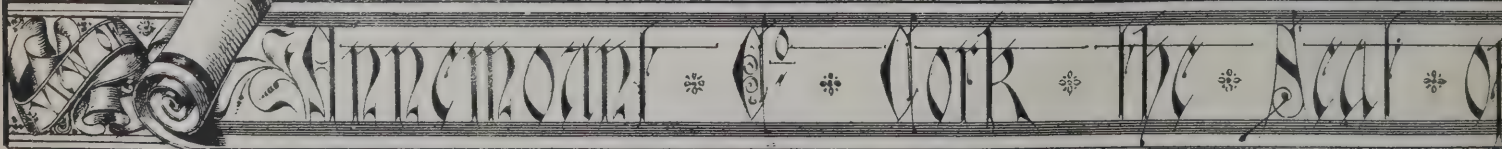
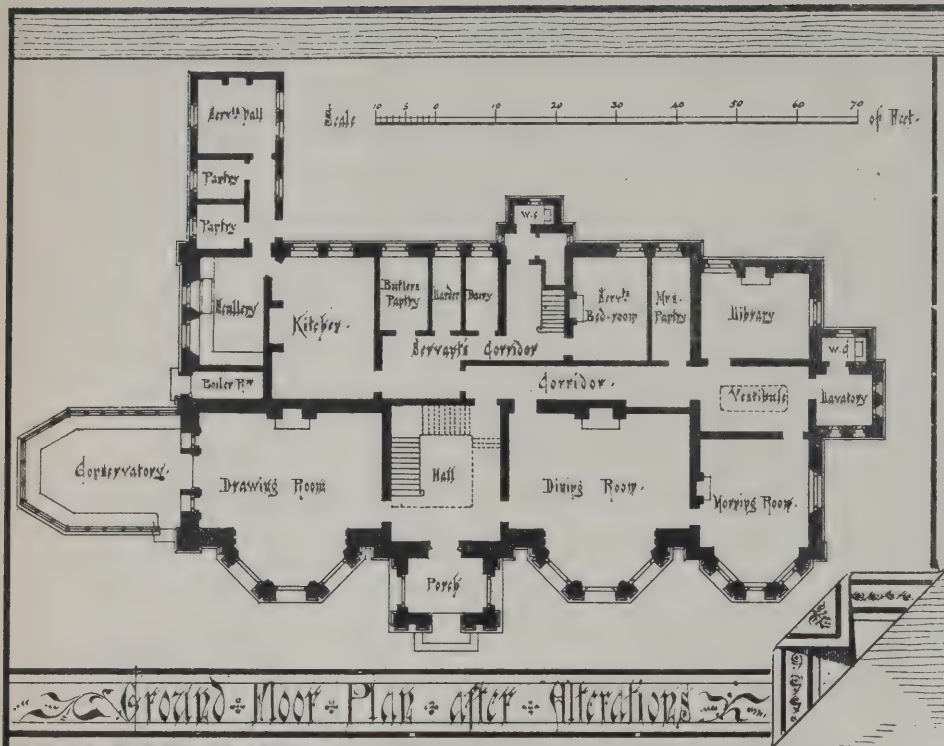












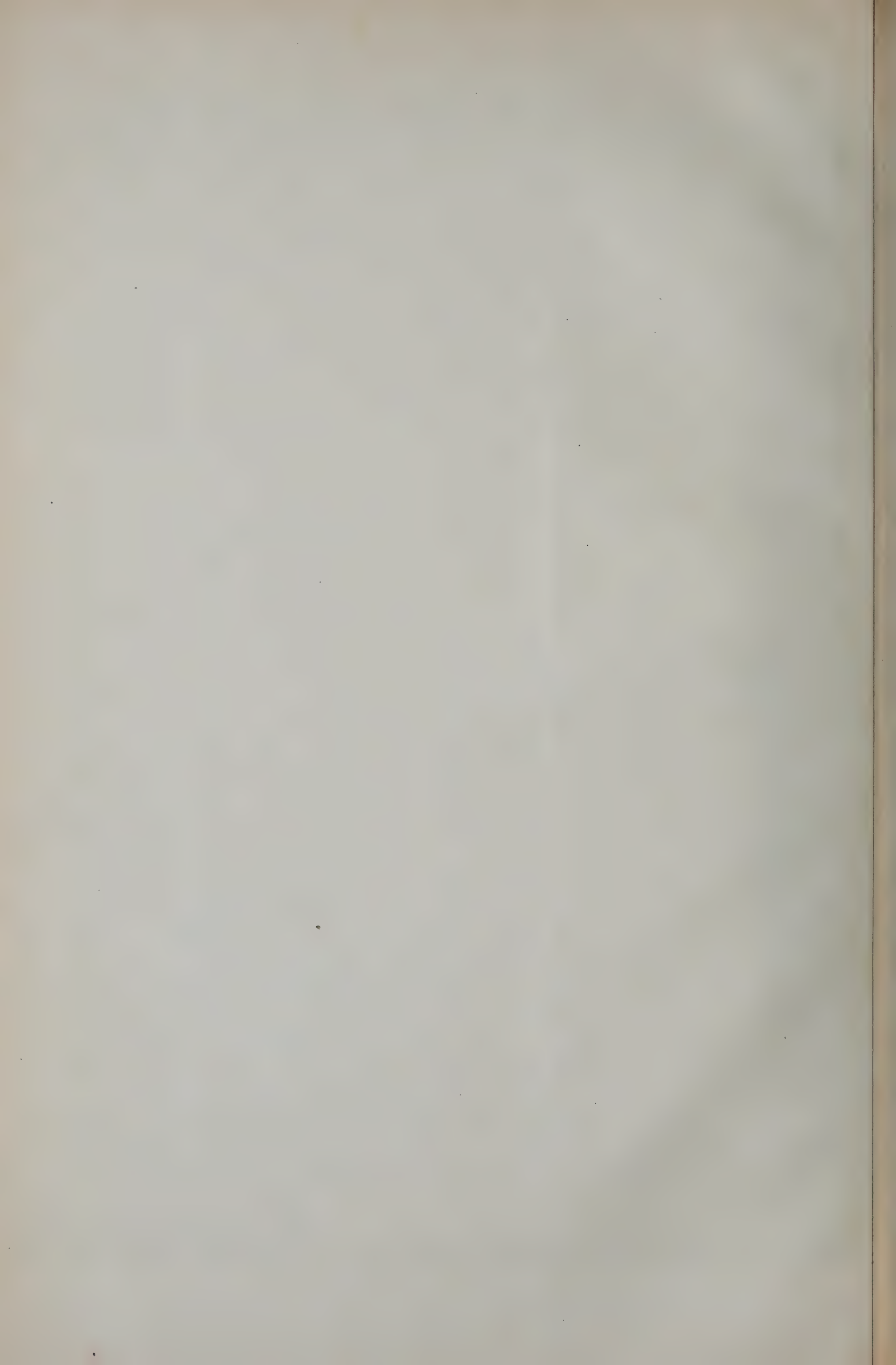


19<sup>th</sup> 1884



John Murphy Esq. J.P. Geo. C. Seblin S.R.H.N. ARCHT. & BUILDER







## ILLUSTRATIONS.

DESIGN FOR NEW CHURCH, GLASGOW.

THE design was prepared for a Presbyterian church in the neighbourhood of Glasgow. It is a notable attempt to provide in the best manner an auditorium in which every person can see and hear the preacher. That is really the most important consideration in a Scotch church where sermons are the chief part of the service. A church of similar arrangement has been built in Dunfermline from plans by the same architects, Messrs. CAMPBELL DOUGLAS & SELLARS, and it has been found very successful acoustically, and convenient for its purposes. An illustration is reproduced in ink-photography of a water-colour sketch by Mr. SELLARS.

THE MERRIDAMS.

THIS view is from the design of a house in English half-timber style, by Mr. MARK J. LANSDELL, A.R.I.B.A., the lower portion being of stone. The corner bay window forms a "snuggery" in the drawing-room. The square bay projects from a side of the dining-room. The room with the double bay window over the entrance forms the best bedroom, and over that is placed the smoking and billiard-room. The kitchen, offices, stables, &c., are placed in the rear, extending to the right.

ANNEMOUNT, CO. CORK.

THIS building is situated on an elevated site, and commands an extensive view of Cork harbour. Before the present course of alterations were commenced there existed two distinct houses, which have been remodelled and converted into one, as shown by the plan which accompanies our view. The principal additions comprise front bay windows and portico, campanile, conservatory, and servants' hall. The architect is Mr. G. C. ASHLIN, A.R.H.A., Dublin, and the builder, Mr. McMULLEN, Cork. The total cost of the work is about 2,500*l*.

## NORTHERN ARCHITECTURAL ASSOCIATION.

A MEETING of the Northern Architectural Association was held in the Old Castle, Newcastle-on-Tyne, on the 8th inst., when the president, Mr. Frank W. Rich, delivered his inaugural address. Two broad subjects, it was said, presented themselves for consideration—one was professional matters, the other related to the public. The art of architecture was popular at present, but architects were not so. This unpopularity was to be attributed in a great measure to the medium degree of excellence exhibited by many of the workmen, and to the want of solidarity between them and architects. Let an architect plan ever so cunningly, said Mr. Rich, his work may be all swamped in its execution. But from what source do we draw our workmen? Will it be believed that practically there is scarcely an apprentice in the majority of the building trades in Newcastle. From whence, then, do we draw our supplies? I am afraid we get the majority of our men from the "jerry" source, or in other words, the speculating builders, and a few are drafted from the country. Time was, and not very long ago either, when every workman had to serve seven years' apprenticeship, and could produce his indentures to that effect. What have we now? A youth in going to business can scarcely get into the best shops. I have discussed this question frequently with some of the principal contractors in this city, and I get one general answer:—"Apprentices are more bother than they are worth." A more deplorable answer can hardly be imagined. So what does the youth do? He gets employment with the jerry builder, passes two or three years in this slipshod school, and then launches himself on the world as a full-blown journeyman, often by the time he is eighteen or nineteen years of age. No wonder that with such a training we should get such indifferent work, for which architects too often get the blame. If the workman is not fitted to do good work no amount of supervision on the part of an architect can alter him. It can only be done by a thorough training in youth. While speaking of apprentices in the building trades we must not forget our own, or pupils as we call them, and we shall find a state of things which is not altogether satisfactory, but arising from different causes to those of the building trades; and if this Association can do anything to better this state of things it would deserve the thanks of the whole profession. A youth under present conditions remains at school until he is about eighteen years of age, and then comes into an architect's office to try to master in three years a some-

what lengthy programme. As I said before, seven years used to be considered a fair time for an apprentice in the building trades to master his trade. Now, we generally consider there are roughly seven trades in what we call the building trades, yet the architectural pupil very frequently endeavours to master in about three years, not only the fine art and theoretical portion of his profession, but also the principles of the whole of the building trades, which will enable him to understand his work. I do not mean to say that it would require the pupil seven times seven years to master all this fine art, theoretical and practical work (although, goodness knows, it takes a long time), but I do mean to say that with the facilities available in Newcastle, a youth has not a chance, when in office, of becoming proficient as an architectural draughtsman in the time allotted to him; and what I mean to adduce from these facts is this, that this Association should endeavour to found some source of education (a chair of architecture in the college for instance) or class work in connection with some institution, and where a youth could largely augment his knowledge either in the daytime or of an evening (for in this high-pressure age in which we live there is little time for leisure), and which would go hand in hand with his day work at the office and render him at the end of his term a really useful architectural draughtsman, or a member of a responsible profession. I will myself, with the permission of this Association, gladly give a money prize to *bona fide* pupils of architects for the best specimen of work either in drawing or other. In the details of such a scheme the Association will no doubt wisely decide, and will perhaps be the means of producing something better than the exhibition of such dreadful so-called architectural pupils' drawings which were lately on view in this city. Our large cities and towns are developing and extending at an enormous rate. The old thoroughfares (like the old sewers) are inadequate. Buildings are now required that fifty years ago were not dreamt of, and there is a difficulty in procuring suitable sites for them. It is clear we must augment our thoroughfares in what we call improvements to the city, and that all our public buildings should adorn and beautify the city. This, it must be admitted, is a very broad subject. But is it not a fact that all so-called improvements—not only in this city, but in almost all others—are not the result of a well-devised and comprehensive scheme, but one worked out piecemeal by the Council collectively, where nearly every member individually would hesitate before attempting such a task? Let us see what is done by a neighbouring corporation—the River Tyne Commissioners. They have charge of what is now a noble river; it was not always so. They have improved it. But they do not attempt to do it themselves. They placed the matter in the hands of an eminent man years ago, and consistently follow a well-devised and comprehensive scheme, which has taken, and may yet take, many years to complete. I do not mean to say that a city like this could be improved at such a rate as the river has been; but I do say this, that if the planning of the improvements to a city were placed in the hands of a similar eminent man—and it seems to me that, as the question is of such architectural importance, that man should be an architect—and he was asked to thoroughly consider and show the best way a city could be improved to meet existing and future wants, I have no doubt the result would be similar to what we see in the river improvements, viz., a whole scheme, a comprehensive plan in every respect, and not one of "shreds and patches." It would show, most probably, main thoroughfares only; for, after all, the old turnpikes "rule the roost," and point the direction of new main thoroughfares. Subsidiary streets would follow by private enterprise; open spaces would be indicated, and sites for public buildings, whereby grand effects in "townscape" (if I may use the word) might be obtained.

Mr. Rich next spoke on the causes of the high death-rate in Newcastle-on-Tyne, and concluded by referring to sanitary associations. These associations, he said, would seem, on the first blush, to be very desirable institutions, but on more mature consideration they do not seem so desirable. Sanitary associations and companies may in some instances do more harm than good, unless they are officered by men who, by their education and practice, are peculiarly fitted for the task. Architects are ever too modest. It is they who should have started a sanitary association, and the association would not then have been trespassing on ground already occupied by men who, I maintain, have kept themselves as much to the front in the march of science as their fellows.

Mr. Thomas Oliver, hon. sec., proposed a vote of thanks to the President for his able and practical address. He said that he believed a system would be shortly introduced by which the contents of bins and earth closets would be removed daily. The able city engineer had been for some time at work on two plans, one of the drainage as it existed, and one as it ought to exist. Within the next twelve months, perhaps in six months, a comprehensive scheme would be laid before the Corporation. He did not altogether agree with the remarks of the President in regard to the sanitary associations; he was a director of one.

Mr. W. H. Dunn seconded the motion, and spoke adversely of sanitary associations.

Mr. Connel supported the motion. He said that they ought not to be jealous of the sanitary associations, but ought rather to work hand in hand with them.



## EDINBURGH ARCHITECTURAL ASSOCIATION.

A MEETING of this Association was held on the 9th inst., Mr. David MacGibbon, president, in the chair. Mr. Walter Kirkwood read a paper on the timbers suitable for building and architectural purposes. The merits and demerits of those woods in general use were pointed out, and the necessity for the craftsman thoroughly understanding their nature and properties insisted on, in order that the good qualities of each might be ascertained and properly applied. The lecturer submitted for the consideration of architects whether it might not be of advantage to introduce in their designs some of the woods from India, Ceylon, South America, and other parts, the beauty of which was shown by specimens exhibited at the meeting. Mr. W. Walker, of Messrs. William Bryden & Son, read a short paper on practical bell-hanging, which he illustrated by working models and patterns. After indicating the usual form of specification prepared to suit the various necessities of domestic work, and explaining some of the technical terms, he detailed the usual methods of fitting up a villa or mansion-house, and enumerated the rules to be observed in good work, as well as the difficulties generally encountered. Some experiences were next related as to the best methods of detecting and preventing thieves and burglars getting access to houses, and a short statement was given of the advantages and disadvantages of the mechanical, pneumatic and electric systems. A short discussion followed the reading of the papers.

## THE FITZWILLIAM MUSEUM.

A MEETING of the Senate of Cambridge University was held on the 10th inst., when Dr. Porter, the late Vice-Chancellor, delivered a valedictory address. After referring to the new appointments, Dr. Porter said:—Against this long list of gains we must set the loss which the University has sustained by Professor Colvin's resignation of the office of director of the Fitzwilliam Museum, in consequence of his acceptance of the office of Keeper of the Prints at the British Museum. Under his direction the museum has been converted from a place of vague sight-seeing to a place of art education; the most important part of the collection of engravings, which now, with the additions of the Kerrich and University Library collections, stands easily second in England, and even takes a high place in the collections of Europe, has been catalogued, arranged, and mounted in the best way for purposes both of study and exhibition; a complete historical and descriptive catalogue of the pictures is now almost finished, and will be published in the course of the present year; the museum library has been supplied with as many publications, series of facsimiles, and other materials for study, as the limited funds permitted; and, lastly, a museum of classical archaeology and art sufficient for the needs of students in that department, and equal, I am informed on high authority, to any foreign collection of the kind except that of Berlin, has been built and almost fully equipped, and in little more than a month will be opened for use. Members of the Senate who have visited this museum cannot fail to be impressed by its remarkable adaptation for its purpose in all details of arrangements, and will heartily congratulate the architect, Mr. Basil Champneys, and Professor Colvin upon achieving a signal success. Dr. Porter then alluded to the visit of the Chancellor in last June, and expressed on behalf of the University its thanks to Mr. G. F. Watts for painting the artistic portrait of the Chancellor, and to Professor Jebb for the graceful inscription.

## LYCIAN ART.

IN the second of his course of lectures at University College on Lycian Art, Professor Newton began with a brief notice of the successive explorations of Lycia which have been carried on by various travellers since the year 1800. Early in this century the coast-line of Lycia was surveyed and for the first time correctly laid down by Sir F. Beaufort, and the late Mr. C. R. Cockerell accompanied him in his cruise, and was the first to discover and publish inscriptions in the Lycian language. The French traveller, Choiseul-Gouffier, and Dr. Clarke also visited the coast about the same time. The exploration of Lycia seems to have proceeded no further till 1836, when Texier, sent on a general mission to Asia Minor by the French Government, examined several cities. Then came the discovery of the monuments of Xanthus by Fellows in 1838, the tours of Lieutenant Hoskins and Schönborn, the English expedition to Xanthus, 1841, 1842, and the discovery of many new Lycian cities by Spratt and Forbes, whose excellent work on Lycia was published in 1847. A digest of all the information collected by travellers in Lycia is to be found in Ritter's "Erdkunde," vol. ix. With the exception of a few casts of rock sculptures, the monuments of art which were acquired by the British Museum in the expedition of 1841 are all from Xanthus. The later of these monuments are arranged in the Lycian Room, the earlier in the Archaic

Room. The most remarkable of the archaic monuments is that usually called the Harpy tomb, which was found in its original position near the theatre and a little below the Acropolis. This monument originally consisted of a rectangular block, weighing about eighty tons, and resting on a level base of rock. Above this was the frieze in relief now in the British Museum, the whole being surmounted by a capstone cut in steps. Inside the frieze was a small chamber, partly hollowed out of the rock, and partly enclosed by the four slabs of the frieze. On the western slab a small oblong aperture has been left, which is just large enough to admit a man's body. This monument corresponds remarkably in form with the tomb of Cyrus, which Strabo describes as a tower of no great size, solid below, but with a roofed chamber above, into which there was a very narrow entrance. On the inside of this chamber Sir C. Fellows found remains of Christian paintings and monograms, which led him to conjecture that it may at some time have been the habitation of some mediæval saint, and he supposes that the legend of Simon Stylites has reference to some such dwelling in a tomb. The subjects of the reliefs sculptured round the Harpy tomb have engaged the attention of several distinguished archaeologists ever since their first discovery, but no explanation commanding general assent has yet been offered. It is evident that the four scenes have a funeral import. This is shown by the four groups of harpies carrying off diminutive figures, which are probably the images of departed souls, and also by the symbol of the cow and calf over the door on the west face, and by offerings, such as the egg, the pomegranate fruit and flower, and the helmet which a warrior on the north side is offering to a seated male deity. The two female deities, who sit opposite each other, may be Demeter and Persephone, and the three figures moving to the right between them may be either the Horæ, the Graces, or some other mythical triad. The three seated male figures on the other side have never been identified. The date of the Harpy tomb is thought to range between B.C. 520 and B.C. 500, though it is possibly earlier than the taking of Xanthus by Cyrus, B.C. 540. The lecturer threw out a conjecture that this tomb may possibly be the Sarpedoneion mentioned by Appian in his account of the siege of Xanthus by Brutus. In that case the warrior offering his helmet on the north side might be Sarpedon himself. The lecturer concluded with a notice of some other archaic Lycian sculptures in the British Museum.

## SOCIETY OF ANTIQUARIES OF SCOTLAND.

A MEETING of this society was held on Monday, Dr. Arthur Mitchell, vice-president, in the chair. The first paper, which was read by Dr. Arthur Mitchell, in the absence of the author, was a notice of the Kilmichael-Glassary Bell Shrine, by Dr. Daniel Wilson, Principal of University College, Toronto. Among the valuable ecclesiastical relics which enrich the National Collection of the Society of Antiquaries of Scotland this beautiful bell-case or shrine claimed special attention, not only as a choice specimen of mediæval art, but as an illustration of the peculiarly Celtic practice of enshrining bells which were relics of their saints. It was accidentally discovered in 1814 in removing a heap of stones on the farm of Torrebhlaurn, in the parish of Kilmichael-Glassary, Argyllshire. The discovery of this interesting relic within an important Celtic area naturally suggested its being assignable to a Celtic origin and Celtic workmanship, and Dr. Joseph Anderson had suggested the possibility of its being identified as the bell of St. Molnay of Lismore, whose crozier is still preserved at Inverary Castle. The legend of the making of St. Molnay's Bell is told in the Aberdeen Breviary, but the bell-case or shrine in which this bell found at Kilmichael is enclosed is plainly of much later date than the bell itself. It is ornamented with interlacements and other designs characteristic of Celtic art, and of a transitional character, probably about the twelfth century, but its curious admixture of square and lozenge patterns, with flowing arabesques and interlaced ribbon patterns, add to the difficulty of assigning a specific date or school of art to this beautiful relic. The representation of the Crucifixion on the front of the shrine also presents peculiar features. After comparing it with the Crucifixion as represented on the Guthrie Bell Shrine, and on the Argyllshire crosses, Dr. Wilson proceeded to call attention to a curious feature in its ornamentation, which differs essentially from all others, and which is detached from all the others by its position above the Divine Hand placed over the head of the crucified figure. It bears a curious resemblance to an Arabic inscription, and on copies of it being sent to several Oriental scholars it was variously deciphered as one or other of the Mohammedan formulas of devotion. Other attempts at explaining the enigma suggested that it must be a representation of the cloven tongues or the Holy Spirit represented as a flame of fire; but for various reasons, which he discussed in detail, Dr. Wilson was led to reject all these suggestions, and to regard the mysterious device as simply a conventional method of representing the cloud from which the Divine Hand issues, as exemplified in many mediæval examples. His object in bringing the matter before the society was to recall attention to this beautiful old Scottish relic, with the view of determining



more precisely its date and the school of art to which it should be assigned. Sir Molyneux Nepean, who occupied the chair while Dr. Mitchell read the paper, expressed his concurrence with Dr. Wilson in the belief that the seeming inscription was not Arabic or any Eastern character, and pointed out that the little bell which the shrine enclosed was made exactly in the same way as he had seen sheep bells made in Brittany. On the motion of Professor Duns a cordial vote of thanks was given to Dr. Wilson for his paper on this interesting relic. The second paper was a notice by Sheriff Thoms of the bells of St. Giles and of the chapel of Holyrood, illustrated by rubbings from their inscriptions. After describing the bells in the tower of St. Giles, and illustrating their history from extracts from the Burgh Records, furnished by the town clerk, Sheriff Thoms referred to the transfer of the bells from the Royal chapel at Holyrood to the chapel in the Cowgate, and concluded by expressing the hope that this notice might be the means of eliciting more definite information regarding them. In the third paper the Rev. Hugh Macmillan, D.D., LL.D., gave an account of a considerable number of cup-marked stones which he had observed in the neighbourhood of Aberfeldy. In the last paper, Dr. Michael W. Taylor, of Hutton Hall, Penrith, described a pair of stone moulds for casting bronze spear-heads of very large size, which had been recently found in Cumberland. The moulds, with castings made from them, were exhibited, and Dr. Taylor presented facsimiles of the two halves of the mould to the museum. A statuette in terra-cotta from Tanagra was exhibited by Mr. J. R. Sibbald.

### LOW CEILINGS.

A "MEDICAL ANNUAL" has been published by Mr. Kimpton, which seems to be well adapted for the use of general practitioners. It includes some useful sanitary memoranda, one of which relates to low ceilings, a subject which has been lately treated by Mr. Honeyman. The writer in the "Annual" says:—The normal circuit of aerial movement in an inhabited room is this: The breath leaves the lungs at the temperature of 98° Fahr., and notwithstanding the high specific gravity of the carbonic acid which it carries with it, ascends towards the ceiling. The products generated by the combustion of light take the same direction, but more rapidly, by virtue of their much higher initial temperature. When these currents reach the ceiling they are deflected by it horizontally as they are continually displaced by successive supplies, and, rapidly cooling as they reach the walls, they there descend, to be again for the most part breathed and burned, but partially to escape by the chimney. Thus, without efficient ventilation, the air becomes more and more deteriorated. When the external air is much colder than the internal, these descending wall-currents passing down the inner faces of closed windows, become chilled, and fall in a cataract which is capable of producing all the effects of an open draught. From the foregoing it will be seen that little if any advantage accrues from the practice of making rooms lofty. The vitiated air does not remain in the upper regions, but in all cases certainly and speedily comes round to the floor. It is better (content for content) to have breadth than height; and, indeed, the moderate lowness of ceiling assists good ventilation, because the gases have the less time to part with their heat before they escape from the room.

### VALUATION OF PUBLIC SCHOOLS.

AN appeal from the Governors of the Royal Grammar School at Shrewsbury, against the assessment, has been heard at the Borough Quarter Sessions. In July 1882, the rate appealed against was made on a gross estimated rateable value of the Grammar School at 780*l.*, and the head-master's house at 65*l.* The Governing Body went to the Assessment Committee and objected to the assessment, and on October 6 last—after five meetings—the committee reduced the valuation. They lumped the school and head-master's house together, and put down the gross value at 1,300*l.*, and the rateable value at 1,137*l.* 10*s.* The contention of the appellants was that the valuation was still too high. The following evidence was given, as reported in the *Shrewsbury Chronicle*:—

Mr. Richard Fowler said: I am a surveyor, practising in Birmingham, and have had more than forty years' experience in rating questions. I have valued parishes for the purposes of rating, and I have been for a good many years chairman of the Assessment Committee of Aston Union, which has a population of 160,000 or 170,000. I have made a valuation of Shrewsbury School and the head-master's house, with the view of arriving at the rent a tenant would give for them, supposing they were let. I have taken first the school building itself, and this I put at 370*l.* gross estimated rental. I put the head-master's house at 350*l.* The next item was the gas-engine, the engine-house, and the well. It is a deep well, to supply the school and masters' houses, and this I put at 70*l.* Then on the land is a shed, which the boys use for shelter when it is wet, and there is a

little shop adjoining, where they sell cakes, lollypops, and oranges. This I put at 10*l.* There is 18 acres of grass land, which I put at 5*l.* per acre, and the total gross rental is 890*l.* I have valued the premises on the same principle as I usually do. I have taken a general view of the extent and the character of the building, and the purpose for which it was to be applied, and then I have taken the buildings separately and ascertained the superficial area of each building, and have placed upon it such a price for the area as leads me to think would be a fair estimate of property of that description. Then I reconsider the result as a whole, and see if it commends itself to my judgment as a fair result. If it does I adopt it, and if not I modify it somewhat.—Cross-examined: I have only one principle that I go upon in making a valuation. I made no calculation as to the sweetshop and shed—it was not worth while. You cannot value a well and such things in exactly the same way as you would a house and school. Perhaps the structural value of these two buildings would be about 9,000*l.* each.—Re-examined: There is a difference between structural value and structural cost. The "value" is what it would sell at, and not what the building cost. The cost of construction has nothing to do with assessment. There has been a great deal of money spent that will never come back in the way of rent. There has been money spent there for ornament and so on that cannot be included in the rent. It has been built as an ornament to the town and a credit to the Governing Body.—To the Recorder: I know of no other way of valuing property such as this. I have never let such a school and buildings as these. If a proposed tenant wanted the school and house, and the rent fixed was too high, he would no doubt build for himself; but if he did do so, he would not expend more money than what was needed for his purposes; but in this case more money had been so spent, and he thought very wisely, to make the school as attractive as possible. A building which would have answered all the commercial purposes might have been erected for a very much less sum than the present buildings cost. When there was no tangible principle to go upon, I take the structural cost, and this is done in the case of the well. I believe the principle of taking the squares of the property is a correct one. It is the one adopted by most valuers. Some take the yard cube, and some the yard superficial, but it is the same thing in the end.

Mr. Henry Burd: I am a land agent and surveyor in this borough, and have been in practice upwards of thirty years. I have had considerable experience in valuing for rating, and also for letting purposes. I have inspected the new school-house and head-master's house on Kingsland. I valued quite independently of Mr. Fowler. My total is 937*l.* 10*s.*, and in arriving at that (the gross annual value) I have endeavoured to put myself in the position of being called in by the landlord to give what is a fair and full value of the property. First of all, I have taken the head-master's house, and have calculated the structural value of all essentials at 10,000*l.*, which I have capitalised at four per cent. That gave a gross annual value of 400*l.* Then I came to the school buildings. I have applied the same principle, and the gross sum is 9,000*l.*, and the gross value 360*l.* I have applied the same principle to the shop and building, which gives 11*l.* 10*s.* The land I put at 90*l.* Then I took the gas-engine at 60*l.* a year, but inasmuch as it supplies the water for the other two houses, I have taken credit for 30*l.*, which leaves 30*l.* gross on that. Then there are special hot water supplies, which have cost about 900*l.*, and upon this I have charged 5 per cent., which ought to make 937*l.* 10*s.* I have taken the cost of construction of what was really essential. In getting at the capital cost I cubed up the building, and so made my calculation as to the gross annual value. I believe that the 10,000*l.* and the 9,000*l.* contain in them everything that is necessary for a school and schoolmaster's house. The amount I estimated is the most the landlord could get.—Cross-examined: I do not deduct anything from the gross to get at the net value. There is a general scale for that. I cannot give the actual cost of the buildings. I dare say it is 30 per cent. more than my structural value. I do not think a man could get more than 4 per cent. upon the 10,000*l.*, which would purchase all the essentials. Looking at it from a landlord's point of view, you cannot get more than 4 per cent. on the 10,000*l.* The master's house is expensively built, from the way in which the elevation is broken up. Pitch pine is used; the front is all pressed brick, and pointed, and all the half brickwork is built in cement. The work is most expensively done throughout. I believe the head-master's house cost about 13,000*l.*; but to supply all the essentials 10,000*l.* would, I say, be sufficient. The 13,000*l.* was more than was sufficient. I have put with the house 1½ acres of ground. I have included for the land in the 10,000*l.*, or, rather, in the annual value which I have fixed. The 10,000*l.* for essentials does not include the land. The landlord may want extra rent for the land, but he would not get it. I cannot tell the exact cost of the school itself. I do not know that 13,147*l.* was spent on that building after the purchase. I have gone on the same principle in regard to the school as the head-master's house.

Mr. Richard Clarke, Birmingham, said: I am borough valuer for Birmingham, and also surveyor for several unions, and have during my experience valued several parishes for rating. I put the gross on the head-master's house at 341*l.*, and the school



buildings at 364 $\frac{1}{2}$ l., the engine-house and well at 55 $\frac{1}{2}$ l., and the engine at 5 $\frac{1}{2}$ l., the pavilion and shop at 15 $\frac{1}{2}$ l., and the land at 100 $\frac{1}{2}$ l. a year. The total is 880 $\frac{1}{2}$ l.—the gross estimated annual value.—Cross-examined: I have taken the master's house at 8,525 $\frac{1}{2}$ l. It could have been built for this to give the accommodation it does. The witness here explained how he made his calculation by means of "squares." The building was put up, he should think, more to please the architect than for the use of the boys, at least it could have been erected for less cost, and yet so as to afford all the accommodation. I have dealt with the school on the same principle.—Cross-examined: I have taken 4 per cent. on the master's house and schools, and 5 on the engine-house and well. I have taken that on the cost, or what I say should be the cost.—To Mr. Hill: I have had some experience in rating schools in Birmingham and other places, and I have adopted the same principle before.

Mr. Henry Hurle Treasure said: I am an architect, surveyor, and building contractor at Shrewsbury. I built the head-master's house, and carried out the alterations at the school itself. I have read the evidence given by Mr. Henry Burd, as to what the work might have been done for to meet all essential requirements and in the ordinary style of building, and I agree with him. I mean if the buildings had been erected in a plain and ordinary style, which they are not. The lead is not absolutely necessary on the roof; and a lead roof, besides the extra cost of the lead, requires stronger timbers.—To Mr. Young: The head-master's house cost 14,436 $\frac{1}{2}$ l., and the school 10,700 $\frac{1}{2}$ l. I believe those were the figures, but I have not got them by me. Including drainage, &c., the total cost of the two was 26,369 $\frac{1}{2}$ l. I do not think it was any saving to utilise the old buildings. The walls were exceptionally strong, and then you have done with the usefulness of the old buildings. If there had been no buildings there at all I believe we could have erected the school quite as cheaply as it was done.—To Mr. Hill: The school floor is of pitch-pine, and red deal would have been sufficient, but would not last so long. Red deal is used in all the Board schools of the town.

The further hearing of the case was adjourned to February 1.

#### A CLERK OF WORKS' AWARD.

A CURIOUS case has just been heard by Mr. C. G. Merewether, Q.C., which has lasted for fourteen days. The action was brought in the High Court of Justice by the plaintiffs, Messrs. Towle, Goulding & Marshall, who carry on business at the Sheepcote Hurdle and Iron Works, Birmingham, against the defendant, who resides at Colney Park, Herts, to recover the price of 3 $\frac{1}{2}$  miles of unclimbable hurdles and an iron-framed building, for breach of two contracts, to have two awards of the clerk of works set aside, and for relief on both contracts. The defendant counterclaimed for 1,000 $\frac{1}{2}$ l. damages for breaches of contract and damage to crops.

In December 1882, the plaintiffs were waited upon by Mr. William Gunn, who represented himself to be a civil engineer acting for the defendant, and they signed a contract prepared by him to make three miles of unclimbable hurdles of "best Staffordshire iron," with gates and tree-guards, and to fix them at Colney Park within a specified time under the superintendence of Gunn, as clerk of works; the price to be 9 $\frac{1}{2}$ l. 10s. per ton. They also signed another contract to make and erect an iron shed 162 feet long for 630 $\frac{1}{2}$ l., the defendant to provide the brick and stone work foundations according to the drawings and specifications. Both contracts contained a clause "that in case of any difficulty or dispute, the award and decision of the clerk of works should be final." When about 2 $\frac{1}{2}$  miles of the fencing had been fixed, Gunn gave orders for an additional half mile beyond the contract, to be made and fixed at the contract rate. The plaintiffs completed the fencing, and the clerk of works then refused to certify the completion, but gave an award without a previous hearing of the parties, whereby it was attempted to deprive the plaintiffs of the benefit of their contract. The iron shed was not completed in consequence of the defendant neglecting to have the necessary brick and stone foundations prepared, and although the plaintiffs had ready on the site the materials and apparatus for the shed, and made applications for the defendant and clerk of works to get the foundation ready, the clerk of works, without previously hearing the parties, made an award putting an end to the contract and throwing the shed material on the plaintiffs' hands. The plaintiffs refused to acknowledge the award, and commenced legal proceedings. When both the awards had been made the plaintiffs discovered that the clerk of works was a weekly servant of the defendant, receiving weekly wages; was formerly a carpenter at Belfast, and knew comparatively nothing about the work which he was supposed to superintend. The defence set up was that the works had not been performed within the specified time; that the fencing was loosely fixed and insufficiently painted, and that the whole would have to be taken up and refixed. Claim was also made in respect of damage alleged to have been done to the hedges and crops; and as to both contracts it was contended that the plaintiffs were barred by the awards of the clerk of the works. It was proved, however, that the fencing was made and painted according to

sample; and fixed, as well as the newly-made ground and hedge-roots would permit, in the line pointed out by the clerk of works. A large number of witnesses were called on both sides, amongst them being several noted iron manufacturers from Staffordshire, to prove the meaning of the term "best Staffordshire" iron, and the quality of the work done; and Mr. W. Phipson, surveyor, gave evidence touching the technical and working details of both contracts, and with respect to the drawings and specifications. The arbitrator gave his award on Monday for the plaintiffs for 1,025 $\frac{1}{2}$ l., with costs, and against the defendant on the counterclaim.

#### DEFECTIVE PLUMBING.

A CASE was heard on Monday in Glasgow, before Sheriff Murray, which arose from a defective drain. The pursuer, Mr. Wm. Robertson, sued Mr. John Neilson, builder, for 12 $\frac{1}{2}$ l. The defender was, in September 1877, employed to alter the drains in pursuer's house. The summons stated that "the work was done in a defective, insufficient, and untradesmanlike manner, in consequence of which obnoxious gases were emitted to the danger of life and health." Pursuer estimated that he had suffered loss to the extent of 30 $\frac{1}{2}$ l., including outlays of 17 $\frac{1}{2}$ l. 8s. incurred in remedying these defects. It was not till May 1883, the work being below ground, that the defects were discovered. The damage was restricted to 12 $\frac{1}{2}$ l. Mr. Robertson having spoken to the contract and to being annoyed with smells for some time in the house, Mr. Gilbert Thomson, engineer for the Glasgow Sanitary Protection Society, was examined as a witness. He stated that in May 1883 he was asked to make an examination of the drains in Mr. Robertson's house, and his opinion was that the pipes had not been properly cemented. Mr. Miller, C.E., said he examined the drains in Mr. Robertson's house. He found that they had been badly laid and badly jointed. For the defence, a witness stated that he assisted to lay the pipes, and that the work had been done in a tradesmanlike manner. He had had twenty years' experience in laying drains. The drains were properly cemented and fixed up. Mr. Neilson, the defender, said he got special instructions to carry the pipes through the house. He did not allow any broken pipes to be used, and the work was executed in a substantial manner. The details connected with the jointing were all properly attended to. From 1877 till 1883 he had heard no complaint, and the pipes had been taken out without his having seen them. His Lordship said that the considerable lapse of time was a presumption in favour of the defender, because he could not at that distance of time bring such evidence as he might have been able to do had the work been recently executed. Another presumption in his favour was his being absent when the pipes were inspected, and it would have been advisable if he had received notice to be present at the opening of the drain. Keeping these facts in view, the Sheriff said he had strong hesitation in giving judgment against defender. Other circumstances, however, which came to light in the course of the evidence proved that there were original defects in the laying of the pipes; and as the present action was simply for compensation for putting right what was originally defective, he found the pursuer entitled to the sum claimed, viz., 12 $\frac{1}{2}$ l.

#### CELTIC AND ROMAN BRITAIN.

AN interesting lecture on this subject was delivered last week before a crowded theatre at the London Institution by Mr. Alfred Tylor, F.G.S. It was illustrated by numerous drawings of remarkable antiquities. Some of them bore Eastern symbols, others were purely Roman in character, others again of British origin. Besides a number from Lydney, they mostly belonged to the Roman remains beneath Warwick Square, explored by the lecturer himself, or to the magnificent Roman villa with its appendages which have been so thoroughly excavated during the last years near Brading by the Messrs. Price. It was pointed out that these Roman remains illustrate the little-known rites of the Persian sun-god Mithra, whose mysteries were introduced into Italy about the beginning of the Christian era. In like manner the sacred symbolic cross called the Svastika appeared on a Roman tessellated pavement, and was compared with the same Vedic emblem found by Dr. Schliemann so often recurring in all the pre-historic strata representing so many successive cities which in their turn stood on the site of Troy. The paddles of the British coracle, or small boat made of skin stretched on wickerwork, were seen, in shape like a pickaxe, on a bronze of the Roman period found at Lydney. The type corresponded with one met with in Persia. The coracles themselves, the lecturer observed, were new to the early Greek navigators in British waters, such as Pytheas, of Marseilles, and excited their admiration; for the ancient Britons went as far as the Scilly Islands in boats which could be carried on a man's shoulders. At Lydney, moreover, there were dedicatory inscriptions in honour of a British god styled by the Roman colonists Deus Nodens—the god of the deep; and probably the temple at Brading, in the Isle of Wight, may have been consecrated to his worship. On one of the antiques exhibited was a man clad in



*bracca*, or breeches, forming the same sort of contrast, as compared with the *gens togata*—the Romans as wearers of the *toga*—that a Highlander does to a Lowlander, or a British grenadier to an Indian sepoy. Mr. Tylor had prepared with great care a map of all the Roman roads which are still in use as great trade highways at the present time, and he pointed out how large a number of them converged at Winchester (*Venta Belgarum*), which was evidently used as a central *entrepôt* for conveying the metallurgical products of Britain to the Continent. So many British sepulchral mounds were to be found on some of these routes that they must have been chariot or horse routes centuries before the Roman occupation of our island. Then from Winchester the tin, iron, and lead from Cornwall and Wales could be carried to Beaulieu; thence eight miles to Stans-ore Point—a name etymologically connected with the word *stannum*, tin—to the shores of the Solent. This point was but a couple of miles from Gurnards Bay, in the Isle of Wight, whence there was an easy road to Brading, a very safe port. Passing to another triumph of early Celtic culture, the lecturer remarked that one great division of the race, the Irish, invented the Ogham script, a most original and ingenious system of writing. It used short straight strokes, counting from one to five, the number of the fingers on one hand, intersecting perpendicularly a long horizontal line. There were thus equivalents for five letters of an alphabet. Other lines, still perpendicular but above the horizontal, gave the notation for five more, or, with the simple change of writing the short uprights below, there were ten more. To complete the Celtic score, the short right lines were again written across the horizontal, but this time slanting. Thus was formed an alphabet of twenty letters, the respective powers of which have been verified by means of bilingual inscriptions. This achievement of the Celtic race corresponded with the high metallurgical and artistic skill shown in their extremely ancient jewellery. Ogham inscriptions were found nowhere outside the British Isles.

#### ROYAL ACADEMY.

THE following students have been admitted to the Architectural School:—

*Upper School*.—A. Howse, A. Kent, E. S. Norton.

*Lower School*.—L. Ambler, C. S. Appleton, W. H. Bidlake, F. Brown, E. A. Coxhead, H. W. Crickmay, A. Dovaston, W. J. W. Ferguson, P. Figgis, H. R. Goodrham, F. C. Hart, J. Lord, F. S. Ogilvie, E. W. Pickford, T. B. Rutherford, H. D. Walton, R. W. Williams.

*Probationers*.—C. J. L. Hall, A. B. Mitchell, J. E. Newberry, E. H. Sedding, E. H. Selby, J. A. Van Straaten, F. W. Troup.



#### Hampton Court.

SIR,—My attention has just been drawn to a picturesque "bit" of Hampton Court Palace, shown in your paper for December 29. The picture is beautiful, but, unfortunately, the chimney is modern. A native of the old palace, I can safely say that there is not one single *old* chimney-shaft left of Wolsey's time, all having been "restored" (?) within the last forty years. It is satisfactory to be able to say the work in most cases has been well done.

I am, Sir, yours faithfully,

HENRY E. JOHNSON.

Fairfield South, Kingston-on-Thames:  
January 15, 1884.

#### Construction of Silos.

SIR,—The kind of silo that was proposed to be constructed in last week's *Architect* would answer well if sufficient precautions were taken. But if, as seems probable from his note, "B" is an amateur, I advise him to call in a builder to carry out that part at least of the work in which Portland cement is used. The period of two months allowed for the setting appears to be unnecessarily long, unless there are local conditions which have not been described. As "B" evidently has some misgivings about the damp of the place, I should recommend him to use asphalt over the concrete as a lining, if expense is not a consideration. But this material is more difficult to deal with than concrete, and experience in its use is requisite. In ordinary situations a pit with a cement floor and sides of hard brick set in cement, and, if necessary, coated with cement, is quite safe. I may also say that "B" will do well to be careful with that part of his silo where the brick joins the concrete, so as to seal the junction against water, and the better plan would be to bring the brick walls down to below the floor level.

Yours obediently,

A BUILDER.

#### CHURCH BUILDING AND RESTORATION.

**Dewsbury.**—The parish church at Dewsbury is to be restored and enlarged under the direction of Mr. A. E. Street, M.A., and Mr. A. H. Kirk, of Dewsbury. The building fund now amounts to 5,000*l.*, and it is proposed to begin the work. The portions of the existing structure to be retained are the nave, with the arcading north and south, and the lower portion of the tower. The new works will include double transepts north and south, chancel, with an aisle on the north side, and an organ chamber on the south (a feature which the church has not hitherto possessed), a clergy vestry and a choir vestry, two entrances on the north side and one on the south. The extension eastwards is the most important part of the project. The new chancel will be 45 feet by 23 feet, in contrast to 26 feet by 17 feet, the dimensions of the old one. The area of the church will thus be double what it is at present, and the accommodation increased to 1,087. The galleries will be removed, and oak stalls substituted for the old-fashioned pews. The stage to be added to the tower, which will contain a bell-chamber, will raise the structure to a height of about 90 feet. The entrance through the tower will be improved, and the ugly windows on the north and south sides of the nave taken out, and replaced by tracery windows of a character in keeping with the other new portions. The roof will be replaced by a new one, and covered with lead. It is intended that the works shall be carried out in sections, so that certain portions of the building may still be used for holding services.

**Hanley.**—The Presbyterians of Hanley are about to pull down their present place of worship, and replace it by a more modern edifice, in consequence of a fire having partly destroyed the interior of the building some short time back. For that object architects have been invited to send in designs for the new building, and the committee have selected the design sent in by Mr. G. W. Bradford, of Miles Bank Chambers, Hanley, and appointed him their architect for the new building. The new church will be of a plain Gothic character, and will consist of nave, with aisles at each side; tower at the west end, two transepts, minister's and deacons' vestry, and gallery at one end, accommodation being provided for 500 persons.

**Mautby, Norfolk.**—The parish church of Mautby, near Great Yarmouth, was on the 10th inst. reopened, after restoration under the superintendence of Mr. A. S. Hewitt, A.R.I.B.A., 10 Regent Street, Yarmouth. When the south aisle was destroyed the arcade was blocked up; this has now been opened out and a new wall built outside the arcade and new windows put in. The roof has been re-thatched and boarded inside, open benches provided instead of the square pews, and the fabric generally restored. The remains of some old stained glass have been carefully preserved. All the works have been satisfactorily carried out by Mr. G. E. Hawes, of Norwich.

#### SCHOOL BUILDINGS.

**Glasgow.**—Two additional Board schools have been opened by Mr. Mundella. The Shields Road school was designed by Mr. J. L. Cowan, and provides accommodation for 850 children, the area being 10 square feet for the older scholars and 8 square feet for infants. The cost of the building was 9,387*l.* 11*s.*, or 10*l.* 15*s.* 8*d.* per scholar. Including site and legal expenses, the cost per scholar was 16*l.* 19*s.* 7*d.* The St. George's Road school was designed by Mr. T. L. Watson, and provides for 1,048 scholars, 10 square feet being allowed for the older scholars, and 8 square feet for infants. The building cost 10,827*l.* 8*s.* 6*d.*, or 10*l.* 6*s.* 7*d.* per scholar. Including site, the cost was 16*l.* 13*s.* 7*d.* per scholar. The St. George's Road is the thirty-third school erected by the Glasgow School Board.

**Northampton.**—The eighty-one designs sent in for the new Board schools in Military Road having been submitted to Professor T. Roger Smith, two bearing the signatures "N" and "Plan" have been selected. Both were submitted by Messrs. W. Talbot Brown and Charles Dorman, joint architects, of Wellingborough and Northampton. Of the whole number of designs, twenty-one, bearing the following mottoes, obtained five-sixths of the full number of marks:—"Whiston," "Perseverantia," "N," "Christmas," "Croquis," "Lux" (a), "Plan," "Straightforward," "Labour omnia vincit," "Nothing like leather," "52," "Experience," "Simplex," "Practical Utility," "Knowledge is power," "Measure for measure," "Light, air, and economy," "Advancement," "Ipsissima," "Late," and "Study." The final selection was between "Light, air, and economy," "Straightforward," "Lux" (a), "Measure for measure," "Plan," and "N," the two latter being ultimately chosen, of which "N" has been decided upon by the members of the Board. In the design marked "N" the main front faces the street, with the boys' entrance at the north-west corner, and the doors for girls and infants at the opposite end. In the boys' department four class-rooms are provided, and a room sufficiently large to accommodate two classes, a sliding glass partition being arranged in the centre for the purpose of dividing the classes. The divisions between the large room and the class-rooms are



proposed to be partly glazed, by which means the head-master would be enabled to overlook the whole of the class-rooms when at his desk. The girls' department is provided with three class-rooms only, but in other respects the arrangements are exactly the same as in the boys' division. In the infants' department four class-rooms, a babies' room, and a large apartment are provided, all arranged so as to be under the supervision of the head-mistress. Every room has windows on two sides, and some on three, while ventilation is secured by means of upright shafts, sashes made to open, openings in the centre of the ceilings, and Boyle's ventilators placed in the turrets. Steam is suggested for heating purposes. The walls are proposed to be of local bricks, with Bath stone dressings to doors and windows. The roofs to be covered with green slates and red ridge tiles, the whole of the rooms to have boarded dados, the floors to be covered with wood blocks, and the playgrounds to be asphalted. The estimated cost is 8,700*l*. The estimated cost of carrying out the other four designs which met with the approbation of Professor Smith was as follows:— "Straightforward," 8*l*. per child; "Light, air, and economy," 9,185*l*.; "Measure for measure," 8,025*l*.; "Lux," 8,800*l*.

## LEGAL.

### Court of Queen's Bench.

(Before Mr. WM. BOTTERILL, Arbitrator.)

OATES *v*. SCALES.

ARBITRATION CASE.

This was an action on the part of a sub-contractor, Mr. James Oates, a builder at Scarborough (involving the measurement of upwards of 5,000*l*. worth of work), for 2,000*l*., the balance of his contract in executing the excavators', bricklayers', masons', and plasterers' work in the erection of new premises, Scarborough, for Messrs. William Rowntree & Sons, brought against Mr. George Scales, the contractor of the said building. The building had been altered at various times during the erection, and the defendant had employed Mr. Wm. Thornicroft, surveyor, of London, to measure up and value the plaintiff's work, and according to such valuation the defendant had already paid plaintiff 2*l*. 8*s*. 2*d*. more than was due to him. By order of the Court the plaintiff was required to furnish particulars of his claim. He then employed Mr. William Hoffman Wood, of Leeds, surveyor, to measure up his work, which was measured and valued and a balance certified him to be due to the plaintiff of 859*l*. 12*s*. 9*d*., and 107*l*. 18*s*. 10*d*. cost of measuring, on which total sum of 967*l*. 11*s*. 7*d*. the plaintiff then sued. Several witnesses were called to prove the different meaning of technical terms in Scarborough and Yorkshire to the same terms as understood in London. In his evidence the plaintiff admitted that a sum of 113*l*. 5*s*. for commission for quantities, included in the sum of 859*l*. 12*s*. 9*d*., had not been paid by him to the defendant or the architect, and this sum was deducted from the plaintiff's claim, which left a balance of 746*l*. 8*s*. 9*d*. claimed by plaintiff. During the evidence, which occupied two or three weeks, the arbitrator, Mr. Botterill, remeasured the whole of the premises with Mr. Thornicroft and Mr. Hoffman Wood, and he gave his award on Monday for the plaintiff for 699*l*. 17*s*. 2*d*., with all costs.

Another claim by the same plaintiff against Messrs. Rowntree & Sons, the owners of the premises, for 93*l*. 11*s*. 2*d*., for days' work, was awarded to the plaintiff with costs.

## GENERAL.

**The Seventh Annual Exhibition** of the Manchester Graphic Club has been opened. Nearly 200 pictures have been contributed by about twenty artists.

**Mr. Ford Madox Brown's** picture—*Work*—has recently passed into the hands of Mr. Benjamin Armitage, of Sorrel Bank, Manchester.

**Mr. Woolner, R.A.**, is engaged on a model of a statue of the late Sir Arthur Kennedy.

**Mr. Burne Jones** is to design the window for St. Philip's Church, Birmingham, which is to be placed in the new chancel. The subject chosen is *The Ascension*.

**Lady Sykes** has presented a chasuble and dalmatics, worth 200 guineas, to St. Wilfrid's Catholic Church, York. The embroidery is ancient Italian work beautifully designed.

**The Loan Exhibition** organised by the Leicester School of Art for the purpose of clearing off their debt promises to be a success. Amongst the works in oil are examples of Sir Edwin Landseer, R.A., Clarkson Stanfield, R.A., Richard Wilson, R.A., Sir A. W. Callcott, R.A., J. W. Oates, A.R.A., B. W. Leader, A.R.A., Morland, Vincent, Nieman, Cole, Henry Dawson, Garland, &c.; and in water-colours David Cox, W. Hunt, Cattermole, G. Barrett, Holland, Cotman, De Wint, Linton, Prout, Varley, and others.

**A Committee** is to be appointed for the purpose of inquiring into the question of railways and other public works in India.

**Miss Barlow**, of Leicester, has given the sum of 8,000*l*. for the building of a church in the Knighton district, a suburb of the town. Messrs. Goddard & Paget, of Leicester, are preparing the plans.

**An Exhibition of Derbyshire Marbles** is to be held at Matlock Bath during the summer.

**Mr. J. Carrick** has been instructed to prepare plans for a block of artisans' model dwellings in Moncur Street, Calton, Glasgow, which will be erected by the Corporation.

**An English Church** will be erected in Copenhagen if sufficient funds are provided. The residents, after several years' exertion, have collected 670*l*., and the donations recently received have raised the amount to 2,666*l*. It is proposed to erect a church capable of holding about 250 persons, at an estimated cost of 5,000*l*. to 6,000*l*.

**Bewick's House**, in Gateshead, has been sold by auction. It was purchased by the wood-engraver in 1814, and he occupied it until his death, in 1828. The house was purchased for 850*l*.

**The Old City of London School** in Milk Street, Cheapside, has been secured for the City Constitutional Club, which is now being established. The building was sold for 60,000*l*. some months back.

**A Design** for the proposed lunatic asylum for the borough of Derby will shortly be sought by competition. The cost of the building will be about 30,000*l*.

**Mont St. Michel**, being exposed to danger from the dyke constructed round it in 1879, an interpellation has been submitted by M. Antonin Proust. Victor Hugo has announced that "Mont St. Michel is for France what the Great Pyramid is for Egypt. It must be preserved from all mutilation. Mont St. Michel must remain an island. This double work of nature and art must be preserved at all cost."

**St. Cuthbert's Church**, Darlington, is to be reseeded in oak at a cost of about 850*l*.

**An old Rubble Wall**, supposed to be part of the Roman wall from which Wallsend obtained its name, has been found in that town at a depth of five feet, in some excavations for building purposes.

**The Gloucester Cathedral Society** met on Tuesday night in the chapter-house of the cathedral, when papers were read by Rev. S. E. Bartleet, on "Bromfield Priory," near Ludlow, a dependent of Gloucester Abbey; by Mr. Gambier Parry, on "Ancient Painted Glass in the Cathedral"; by Mr. Waller, on "Examples of the Different Styles of Architecture in the Cathedral"; and by Mr. J. J. Powell, Q.C., on "The Election of a Boy Bishop, A.D. 1558," the last occasion on which a boy bishop was elected for Gloucester Cathedral.

**The Cockburn Association**, Edinburgh, proposes memorialising the Government on the subject of Edinburgh Castle, and the restoration of the ancient "Aula Castri," or Parliament House, and other ancient and historical parts of the castle.

**A Tunnel** under the river Forth, at Kincardine, over a mile in length, is included in one of the railway schemes to be submitted to Parliament.

**Mr. Nicholson**, diocesan architect, has been requested to prepare an estimate of the cost of restoring St. Peter's Church, Hereford, for which several sums of money have already been given.

**The Metropolitan Board of Works** have approved of a recommendation that notices should be served on the owners of the Princess's and St. James's Theatres requiring them to make extensive alterations to remedy the structural defects of the buildings.

**A Difference** has arisen between the Birmingham master builders and stonemasons upon the question of wages. In accordance with a resolution passed at a meeting of the stonemasons' trade union, the secretary of that organisation gave notice to the secretary of the Master Builders' Association for an increase of a halfpenny per hour, to take effect from April 1 next. A reply was received to the effect that the employers would require a reduction of a farthing per hour after the date mentioned.

**A Company** has been formed in Glasgow "for the purpose of supplying additional cemetery accommodation," principally for the central, northern, and eastern parts of the city. It is proposed to purchase about 92 acres of land at Letham Hill as a site. Mr. W. F. Salmon is architect to the company.

**A Small Chamber** has been discovered at Wegbar, near Carnforth, in the quarries belonging to the Earl of Crawford and Balcarres. Among the antiquities found in it are a large perforated stone hammer, beautifully formed, and a stone quern for grinding corn; a bronze celt or axe head of the ordinary type, 5½ inches long and 3 inches broad at the cutting edge; a fine socketed spear head, 9 inches long and 5 inches wide at the broadest part; a portion of a bronze sword, 8½ inches long and 1¼ inches broad; a fine axe head of iron, 6½ inches long and 6¾ inches broad at the cutting edge; and a spinning-wheel 6 inches in diameter.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JANUARY 19, 1884.

### TENDERS, ETC.

*\*\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*\*\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
"Contract Supplement to THE ARCHITECT."*

### EDITORIAL NOTICES.

*The authors of signed articles and papers read in public must necessarily be held responsible for their contents.*

*No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.*

*Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.*

### APPOINTMENT VACANT.

CHELMSFORD.—Jan. 25.—Applications are required by the Chelmsford Rural Sanitary Authority for the Appointment of a District Surveyor. Salary 250l. per annum. Applications are also required for the Appointment of an Assistant Surveyor for the District. Salary 200l. per annum. Mr. W. W. Duffield, Clerk to the Rural Sanitary Authority, 96 High Street, Chelmsford.

### COMPETITIONS OPEN.

ABERDEEN.—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10s. 6d. to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

BLOEMFONTEIN.—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

CAPE TOWN.—Jan. 30.—The Town Council of the City of Cape Town invite Plans and Specifications, accompanied with approximate estimate of cost, of a System of Drainage. Selected Plans and Specifications to become the absolute property of the Corporation. All others will be returned free of expense. Premium of 250l. A plan of the City, with levels, may be seen, and further information may be obtained, on application to the South African Loan, Mortgage, and Mercantile Agency, 9 King William Street, London, E.C.

LEICESTER.—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

LONDON.—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

ST. PANCRAS.—Feb. 1.—Designs are invited for Buildings for Mortuary and Coroner's Court. Mr. T. Eccleston Gibb, Vestry Clerk, Vestry Hall, St. Pancras Road, N.W.

UXBRIDGE.—Jan. 31.—For System of Sewerage and Sewage Disposal. Mr. Charles Woodbridge, Clerk to the Rural Sanitary Authority, Uxbridge.

WALMER.—Jan. 21.—Designs are invited for Laying Out the Estate of St. Clare for Building Purposes. Messrs. W. & T. Denny, Walmer.

### CONTRACTS OPEN.

ABERDEEN.—Jan. 26.—For Supplying, Erecting, Fixing and Testing Hydraulic Machinery, for the new Dock Gates, Victoria Dock. Mr. Wm. Smith, Harbour Engineer, Aberdeen.

ABERSYCHAN.—Jan. 25.—For Building County Police Station. Messrs. James, Seward & Thomas, Architects, St. John's Chambers, Cardiff.

AVEMORE.—Jan. 24.—For Construction of Bridge over the River Spey; Masonry, &c., in Abutments and Pier, Wrought-ironwork Superstructure, and Cast-iron Cylinders in Pier, &c. Mr. W. Roberts, Engineer, Surveyor's Office, Kingussie.

BAMFORD.—Jan. 19.—For Fencing Site of proposed Church of St. Michael. Mr. H. C. Charlewood, Architect, 6 John Dalton Street, Manchester.

BARNSELY.—Jan. 21.—For Building Two Dwelling-houses in Sackville Street. Messrs. Dixon & Moxon, Architects, 5 Eastgate, Barnsley.

BELFAST.—Jan. 29.—For Rebuilding Business Premises and Dwelling-house, Main Street, Bangor. Mr. John Boyd, Architect, 9 Donegall Square West, Belfast.

BERWICK-ON-TWEED.—Jan. 22.—For Single-lift Gas-holder for Works at Spittal, for the Berwick and Tweed-mouth Gaslight Company. Mr. Paterson, C.E., Warrington.

BLACKBURN.—Jan. 29.—For Separate Works in the Erection of Infirmary at the Union Workhouse. Mr. James Aspinall, Architect, 2 Victoria Street, Blackburn.

BLACKPOOL.—Jan. 29.—For Construction of Gasholder Tank. Mr. Chew, Engineer, Gas Office, Blackpool.

BLACKROCK.—Jan. 23.—For Extensive Additions to Sandymount House. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

BOLTON.—Jan. 19.—For Construction of Outfall Sewage Works at the Hacken. The Borough Surveyor, Town Hall, Bolton.

BRADFORD.—Jan. 19.—For Taking Down Block of Four Cottages and Building Small Four-storey Warehouse. Messrs. Milnes & France, Architects, 99 Swan Arcade, Bradford.

BUCKHURST HILL.—Jan. 23.—For Enlargement of Infant School, Albert Road North, for the Chilwell School Board. Mr. Edmund Egan, Architect, Loughton.

CLACTON-ON-SEA.—Jan. 21.—For Building Ten Houses for Mr. Charles Garrood, South Lodge, Forest Hill.

CROYDON.—Jan. 21.—For Alterations and Additions to Board Schools. Messrs. Berney & Monday, Architects, North End, Croydon.

DARLINGTON.—Jan. 26.—For Erection of Free Library Buildings. Mr. G. G. Hoskins, Architect, Northgate, Darlington.

DUBLIN.—Jan. 24.—For Building a Dispensary in South Earl Street, for the South Dublin Union. Mr. W. M. Mitchell, Architect, 10 Leinster Street, Dublin.

DUMFRIES.—Jan. 21.—For Erection of Station Buildings, Platform, and Platform Wall. Drawings, &c., at the Engineer's Office, St. Enoch Station, Glasgow.

EASTBOURNE.—Jan. 31.—For Erection of Town Hall and Municipal Buildings. Mr. Charles Tomes, Borough Surveyor, Eastbourne. Mr. W. Tadman Foulkes, Architect, 100 Colmore Row, Birmingham.

EBBW VALE.—Jan. 26.—For Building Hotel and Stables. Mr. E. A. Johnson, Architect, Abergavenny.

ELIE, N.B.—Jan. 25.—For Building Coastguard Station. Director of Works Department, Admiralty, 71 Spring Gardens, London, S.W.

ENFIELD.—Feb. 19.—For Building Separate Workhouse Schools. Mr. T. E. Knightley, Architect, 106 Cannon Street, E.C.

FYVIE.—Jan. 19.—For Building Dwelling-house, Cowhill. Mr. Chalmers, Rothiebrisanne.

GRANGE.—For Building Farmhouse and Additions to Steading. Mr. D. Menzies, Architect, 39 York Place, Edinburgh.

GREAT BENTLEY.—Jan. 19.—For Building School and Chapel Keeper's House. Mr. F. Evelyn Morris, Architect, Colchester.

GREAT HORTON.—Jan. 21.—For Additions and Alterations to Residence. Messrs. W. & R. Mawson, Exchange, Bradford.

HALIFAX.—Jan. 31.—For Building two Shops and Dwelling-houses. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

HARROGATE.—Jan. 25.—For Excavating and Drainage Works for Erection of Premises. Messrs. H. E. & A. Bown, Architects, James Street, Harrogate.

HEADINGLEY.—Jan. 23.—For Building (joiner work excepted) Sixteen Houses and Shops. Mr. James Charles, Architect, 14 Butts Court, Albion Street, Leeds.

HORNCASTLE.—Jan. 21.—For Alterations to Local Board Premises. Mr. Charles Dee, Clerk to the Local Board, Horncastle.

HORSFORTH.—Jan. 23.—For Additions and Improvements to Passenger Station and Building Goods Warehouse. Mr. William Bell, Architect, York.

KINROSS.—Jan. 25.—For Repairing and partly Rebuilding March Dyke, with Wires on the top, between Kinraigie and Piglorns, near Strathmiglo. Mr. Geo. Bogie, Solicitor, Kinross.

KIRKBY-IRELETH.—Jan. 22.—For Improvement and Refitting of the Parish Church. The Committee for the Improvement of Kirkby-Ireleth Parish Church, Kirkby-in-Furness.

LEEK.—Jan. 26.—For Reconstruction and Enlargement of Primitive Methodist Chapel and Schools. Messrs. W. Sugden & Son, Architects, Leek.

LONDON.—For Building Extensive Range of Premises, Stabling for Eighty Horses, Warehouse, &c., Upper East Smithfield. Mr. James Butterworth, Architect, 6 Museum Street, Ipswich.



LONDON.—Jan. 23.—For Lighting the Mansion House by Electricity. Mr. Horace Jones, City Architect, Guildhall, E.C.

LONDON.—Jan. 25.—For Lighting certain Streets in the City by Electricity. Mr. Henry Blake, Sewers Office, Guildhall, E.C.

MIDDLESBROUGH.—Jan. 19.—For Construction of Hury Reservoir (Contract No. 3). Mr. Mansergh, C.E., Engineer, 3 Westminster Chambers, Victoria Street.

MIRFIELD.—Jan. 21.—For the Works in the Enlargement and Additions to Westfield House, The Knowle, Mirfield. Mr. Walter Hanstock, Architect, Branch Road, Batley.

NEWCASTLE-ON-TYNE.—Jan. 21.—For Converting Chapel into Premises. Messrs. Oswald & Son, Architects, 2 St. Nicholas Buildings, Newcastle-on-Tyne.

NORTHAMPTON.—Feb. 1.—For Building Lock-up on Race Course. The Surveyor, Guildhall, Northampton.

NOTTINGHAM.—For Erection of House, Stabling, Out-buildings, &c., Forest Road. Mr. Sidney R. Stevenson, Architect, Imperial Buildings, Victoria Street, Nottingham.

READING.—Jan. 22.—For Works required in Alterations of the present Buildings of the Reading and Earley combined Board School, and in the Erection of Additional Buildings for the Infants' Department. Messrs. Morris and Stallwood, Architects, Friar Street, Reading.

RIO DE JANEIRO.—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

ROCHESTER.—Jan. 23.—For the Construction of a Bridge to carry a Double Line of Railway over the River Medway. Plans and Particulars at the Engineer's Office, 5 St. Thomas' Street, London Bridge, S.E.

ROWERY BRIDGE.—Jan. 26.—For Building Cartwright's Shop (two storeys) and Dwelling-house, Allen Road. Mr. Charles F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

ST. PANCRAS.—Jan. 24.—For the Erection of Additional Workhouse Buildings for 500 Inmates, on Cook's Terrace Site, adjoining the Workhouse, St. Pancras Road. Mr. H. H. Bridgman, Architect, 42 Poultry, E.C.

SWANSEA.—Jan. 23.—For Erection of New Blocks and Extensions and Alterations to the present Swansea Union Workhouse. Messrs. Blessey & Aspinall, Architects, Cardiff.

SWANSEA.—For Reseating and other Alterations, Ilston Church. Mr. J. B. Fowler, Architect, Brecon.

## TENDERS.

### BIRCHINGTON.

For Building Eight Villas at Birchington Bay Estate, Kent, for Birchington Bay Estate Co., Limited. Mr. E. C. HOMER, Architect, Mansion House Chambers, WATERMAN (accepted) . . . £7,200 0 0

### CARDIFF.

For the Erection of Engineering Works, Bute Docks, Cardiff, for the Wallsend Slipway and Engineering Co., Limited. Quantities by Mr. S. Rooney, Cardiff. SHEPHERD, Cardiff (accepted) . . . £7,200 0 0

### CLACTON-ON-SEA.

For Additions to the Waverley Hotel, Clacton-on-Sea. Mr. CHARLES BELL, F.R.I.B.A., Architect, Dashwood House, 9 New Broad Street. Quantities by Mr. Henry Lovegrove, 26 Budge Row.

Foster & Dicksee . . . . .	£3,799 0 0
Porter . . . . .	3,786 0 0
Saunders . . . . .	3,730 0 0
Martin . . . . .	3,667 0 0
Wood . . . . .	3,490 0 0
Gillingham . . . . .	3,445 0 0
Brown . . . . .	3,398 0 0
Everett . . . . .	3,349 0 0
Gibbons . . . . .	3,300 0 0

### DULEEK.

For Carrying Out Drainage of District, Duleek, Co. Meath. Daly, Dublin . . . . . £9,750 0 0  
Barnes, Kells . . . . . 7,451 0 0  
Stapleton, Duleek . . . . . 6,200 0 0  
Fox, Athboy . . . . . 6,160 10 0  
HATCH, Duleek (accepted) . . . . . 5,744 16 0

### ELTHAM.

For Construction of Brick Sewer (14,000 feet), Eltham. Sir J. W. BAZALGETTE, Engineer.

Bottom Bros. . . . .	£39,970 0 0
Pearson . . . . .	34,890 0 0
Beadel Bros. . . . .	33,174 0 0
Nowell & Robson . . . . .	32,750 0 0
Neave . . . . .	32,500 0 0
Williams & Wallington . . . . .	31,200 0 0
Killingback . . . . .	29,500 0 0
Ford & Everett . . . . .	29,500 0 0
Webster . . . . .	28,300 0 0
Hill Bros. . . . .	27,422 5 9
Mowlem & Co. . . . .	26,348 0 0
Kellett . . . . .	23,500 0 0
STEVENSON (accepted) . . . . .	19,995 0 0

### GRAVESEND.

For Building Caretaker's House at the Church Street Board Schools, for the Gravesend U. D. School Board. Mr. Wm. GOULD, Architect. Quantities not supplied.

Hill . . . . .	£462 19 0
Goldfinch . . . . .	386 0 0
W. & E. Wallis . . . . .	385 0 0
Archer . . . . .	384 0 0
Hopkins . . . . .	372 10 0
Seager . . . . .	354 0 0
Tuffee . . . . .	336 0 0

### GREAT YARMOUTH.

For Drainage Works, Great Yarmouth, Contract "D." Mr. J. Wm. COCKRILL, Borough Surveyor.

Cook, Bennett, & Thew, Spalding . . . . .	£2,499 0 0
Beadel Bros., Erith, Kent . . . . .	2,470 0 0
Neave, London . . . . .	2,466 0 0
Want, Yarmouth . . . . .	2,309 10 0
Cosham, Newark . . . . .	2,250 0 0
Nudd, Yarmouth . . . . .	2,227 9 6
Downing, Norwich . . . . .	2,100 0 0
Botterill, London . . . . .	2,089 0 0
Harbert, Yarmouth . . . . .	1,932 0 0
Wood, Chelmsford . . . . .	1,870 0 0
Cork & Beech, Yarmouth . . . . .	1,810 0 0
Cowdery, Newent, Gloucestershire . . . . .	1,788 0 0
Bennett, Ipswich . . . . .	1,730 0 0
Gibson, Exeter . . . . .	1,710 0 0
HAYWARD, Eastbourne (accepted) . . . . .	1,655 0 0
Nicholson, Brentwood . . . . .	1,560 10 6
Surveyor's Estimate . . . . .	1,950 0 0

### HEBBURN.

For Street Improvement Works, Hebburn. Mr. FRED. WEST, Surveyor.

Maughan, Jarrow . . . . .	£5,113 0 0
Moody, South Shields . . . . .	5,075 0 0
Munns, Hebburn . . . . .	4,852 0 0
W. & M. YOUNG, Gateshead (accepted) . . . . .	4,415 0 0

### INVERNESS.

For New Works at the Harbour, Inverness. M'DONALD, Hilton (accepted) . . . . . £3,670 18 2

### JARROW.

For Construction of Brick Sewers, with Outfall Works, &c., Jarrow. Mr. J. PETREE, Borough Surveyor.

Smith, Newcastle . . . . .	£2,335 8 6
Maughan, Jarrow . . . . .	1,446 13 10
Adams, Jarrow . . . . .	1,357 11 9
Dixon, Jarrow . . . . .	1,320 0 0
Lumsden, Jarrow . . . . .	1,292 0 0
Kennedy & Son, Jarrow . . . . .	1,237 0 0
Waugh, Jarrow . . . . .	1,225 4 2
YEELS, Jarrow (accepted) . . . . .	1,089 13 0
Engineer's estimate . . . . .	1,222 3 0

For Street Improvement Works, Jarrow. Mr. J. PETREE, Surveyor.

Adams . . . . .	£592 3 4
Callaghan . . . . .	496 19 9
MAUGHAN (accepted) . . . . .	484 15 0
Surveyor's Estimate . . . . .	522 8 6

### LEICESTER.

For Alterations and Additions to St. Margaret's Foundry, Leicester. Mr. R. J. STEPHENS, Architect, Belvoir Street. Quantities supplied.

Turner . . . . .	£266 0 0
Hewitt . . . . .	248 0 0
Barnett . . . . .	243 0 0
Bray . . . . .	240 0 0
Hude . . . . .	238 0 0
Stevens . . . . .	235 0 0
Richardson & Son . . . . .	230 0 0
Jewesbury . . . . .	222 0 0
Tyers . . . . .	213 9 0
WAIN (accepted) . . . . .	193 10 0

### LIVERPOOL.

Messrs. Renton Gibbs, of Liverpool, have taken contracts for Heating at Carlingham Grammar School, Batley; Cloak-room at Central Station, Manchester; Upland Schools; Business Premises, Goldenhill, Tunstall; Warehouse, Long-ton; and Messrs. Lambert & Butler's Warehouse, London.

### LONDON.

For New Warehouses, 10 & 11 Little Trinity Lane, E.C. Mr. H. H. COLLINS, Architect, 61 Old Broad Street, E.C.

Ockenden . . . . .	£2,593 0 0
Boyce . . . . .	2,283 0 0
Ashby & Horner . . . . .	2,257 0 0
Morter . . . . .	2,254 0 0
Colls . . . . .	2,219 0 0
Downs . . . . .	2,189 0 0
Shepherd . . . . .	2,177 0 0
Roberts . . . . .	2,173 12 0
Greenwood . . . . .	2,129 0 0
Croaker . . . . .	2,024 0 0

For Enlargement of Brecknock School, Camden Town, for the London School Board. Mr. E. R. ROBSON, Architect.

Turtle & Appleton . . . . .	£4,265 0 0
Goodman . . . . .	3,773 0 0
L. H. & R. Roberts . . . . .	3,767 0 0
Reading . . . . .	3,739 0 0
Williams & Son . . . . .	3,570 0 0
Stimpson & Co. . . . .	3,563 0 0
Smith & Sons . . . . .	3,545 0 0
Scrivener & Co. . . . .	3,523 0 0
Shurmer . . . . .	3,492 0 0
Bangs & Co. . . . .	3,392 0 0
Atherton & Latta . . . . .	3,399 0 0
Patman & Fotheringham . . . . .	3,285 0 0
Brass . . . . .	3,270 0 0
Wall . . . . .	3,250 0 0
Jerrard . . . . .	3,210 0 0
Wall Bros. . . . .	3,195 0 0

### LONDON—continued.

For Building Board School, Smeed Road, Hackney. Mr. E. R. ROBSON, Architect.

Johnson . . . . .	£15,639 0 0
F. & F. J. Wood . . . . .	15,343 0 0
Boyce . . . . .	15,180 0 0
Pritchard . . . . .	15,165 0 0
Kirk & Randall . . . . .	15,093 0 0
Gentry . . . . .	14,981 0 0
Goodman . . . . .	14,900 0 0
Patman & Fotheringham . . . . .	14,642 0 0
Lawrance & Sons . . . . .	14,556 0 0
Grover . . . . .	14,487 0 0
Bangs & Co. . . . .	14,310 0 0
Hook . . . . .	14,296 0 0
Oldrey . . . . .	14,230 0 0
Brass . . . . .	14,214 0 0
Smith & Sons . . . . .	14,179 0 0
Wall . . . . .	14,135 0 0
Scrivener & Co. . . . .	14,118 0 0
Jerrard . . . . .	14,093 0 0
Cox . . . . .	14,060 0 0
Atherton & Latta . . . . .	14,000 0 0
Shurmer . . . . .	13,986 0 0
Wall Bros. . . . .	13,970 0 0
Perry & Co. . . . .	13,845 0 0

For Building Board School, Grange Road, Bermondsey. Mr. E. R. ROBSON, Architect.

Turtle & Appleton . . . . .	£12,573 0 0
Johnson . . . . .	11,543 0 0
Lathey Bros. . . . .	11,243 0 0
Marsland . . . . .	11,220 0 0
Downs . . . . .	11,180 0 0
Shepherd . . . . .	11,111 0 0
Lawrance & Sons . . . . .	10,936 0 0
Bangs & Co. . . . .	10,910 0 0
Tongue . . . . .	10,905 0 0
Hook . . . . .	10,854 0 0
Perry & Co. . . . .	10,838 0 0
Patman and Fotheringham . . . . .	10,833 0 0
Grover . . . . .	10,829 0 0
Cox . . . . .	10,800 0 0
Brass . . . . .	10,800 0 0
Atherton & Latta . . . . .	10,789 0 0
Wall . . . . .	10,759 0 0
Smith & Sons . . . . .	10,755 0 0
Burt . . . . .	10,609 0 0
Stimpson . . . . .	10,569 0 0
Wall Bros. . . . .	10,521 0 0
Kirk & Randall . . . . .	10,459 0 0
Jerrard . . . . .	10,439 0 0
Oldrey . . . . .	10,395 0 0

For Building Board School, Malmesbury Road, Bow. Mr. E. R. ROBSON, Architect.

Johnson . . . . .	£13,657 0 0
Goodman . . . . .	13,422 0 0
Pritchard . . . . .	12,725 0 0
Kirk & Randall . . . . .	12,724 0 0
Hook . . . . .	12,677 0 0
Gentry . . . . .	12,680 0 0
Patman & Fotheringham . . . . .	12,588 0 0
Smith & Sons . . . . .	12,515 0 0
F. & F. J. Wood . . . . .	12,496 0 0
Bangs & Co. . . . .	12,475 0 0
Lawrance & Sons . . . . .	12,407 0 0
Grover . . . . .	12,325 0 0
Stimpson & Co. . . . .	12,254 0 0
Oldrey . . . . .	12,230 0 0
Boyce . . . . .	12,206 0 0
Brass . . . . .	12,200 0 0
Wall Bros. . . . .	12,186 0 0
Wall . . . . .	12,168 0 0
Cox . . . . .	12,144 0 0
Atherton & Latta . . . . .	12,100 0 0
Shurmer . . . . .	11,989 0 0
Jerrard . . . . .	11,947 0 0
Perry & Co. . . . .	11,866 0 0

For Building Board School, Ruby Street, Peckham. Mr. E. R. ROBSON, Architect.

Turtle & Appleton . . . . .	£10,765 0 0
Williams & Son . . . . .	10,277 0 0
Johnson . . . . .	10,149 0 0
Lathey Bros. . . . .	9,829 0 0
Bangs & Co. . . . .	9,719 0 0
Perry & Co. . . . .	9,530 0 0
Shepherd . . . . .	9,510 0 0
Atherton & Latta . . . . .	9,462 0 0
Marsland . . . . .	9,337 0 0
Loneragan Bros. . . . .	9,300 0 0
Downs . . . . .	9,277 0 0
Oldrey . . . . .	9,180 0 0
Brass . . . . .	9,174 0 0
Patman & Fotheringham . . . . .	9,153 0 0
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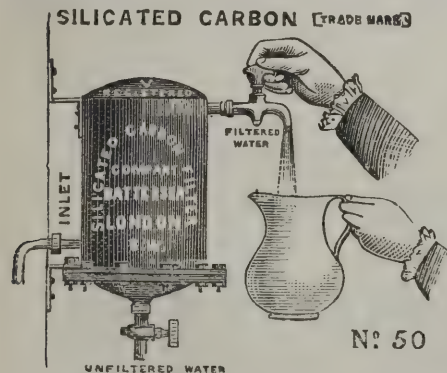
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Ingram & Sons, Ventnor . . . . .	3,180	0	0
Newnham, Ventnor . . . . .	3,120	0	0
Sims & Rowsell, Ventnor . . . . .	3,100	0	0
Silsbury & Kingswell, Ventnor . . . . .	2,906	0	0
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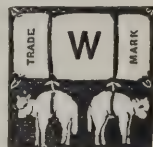
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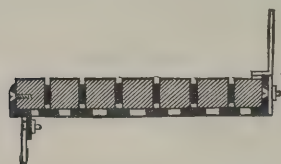
# LINDSAY'S

## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

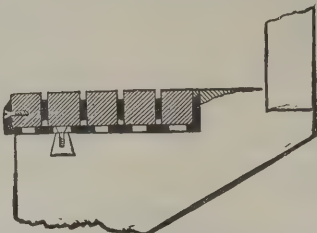
### FOR EVERY DESCRIPTION OF STAIRCASE.

THIS Patent is an improvement on the well-known wooden block construction, and its speciality is that the wooden blocks in each Tread can be removed and transposed so many times that it is almost indestructible besides being noiseless.

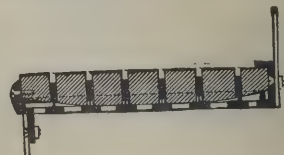
No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.



In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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# The Architect.

## PUBLIC OPINION UPON ARCHITECTURE.



IF we were asked to give a definition of the term, "the architectural profession," perhaps it would be most convenient, in England and amongst English associations, to say that it is made up of those persons whose business is the design and supervision of the housebuilding that goes on. Of course this language has itself to be defined; but it is enough for our present purpose to say that the word "housebuilding" must be taken in a sufficiently wide sense, and that "design" also has to be interpreted freely. A cathedral may easily be regarded as a house within the meaning of the definition, but so must an Albert Memorial or a Nelson Column; while the design of the edifice must be taken to include in all respects both its construction and its appearance. But after all it is the word "supervision" which is probably the most important as regards the particular views of English people; and, if we say "direction" instead, and thus call an architect a *director* of building, the very vagueness of the term, and even its commercial associations, if so regarded, seem to convey all the better the vernacular idea of design of every kind, combined with supervision of every kind, which an essentially commercial people may be understood to entertain. The function of an architect, that is to say, is to take upon himself the whole direction of a building transaction, and to carry it through in a thoroughly expert and businesslike way.

Now, it is often said that English public opinion goes very much against English architects. This, we may at once reply, is not correct as matter of fact. The English public, as a rule, are found to be quite satisfied with their architects. In other words, an average Englishman, in contemplating an average building, is generally satisfied with the way in which his wishes have been carried out by an average architect. But then we shall be told to look at the work which is above the average, and far above it; and to regard also that kind of Englishman who is in the same way a superior person. The proposition here implied is that the cultivated Englishman is in advance of the cultivated English architect; and now we have generally to confine our attention to an æsthetic view of the question. For architectural design, in any work of importance well done, has always professed to be artistic design, and what we are now called upon to answer is the charge that the best of our artistic work in building is deemed unsatisfactory by the higher public opinion of the nation, or that architectural art in England is behind the architectural criticism of people of culture in England.

Allowing for the effect of travel, no doubt we are bound to admit that Englishmen of the best natural taste must be led to draw intelligent comparisons between the chief public and private edifices at home and their counterparts abroad, and to feel that certain foreign cities are in advance of English cities in various points of architectural treatment. The French in particular, but the Germans and the Italians also in their degree, seem to understand and appreciate the *architecturesque* far more than we do. Not only the *mise en scène* of the streets, but the management of the individual factors in the grouping and disposition, and not only the *ensemble* of any one of those factors, but the whole administration of its features of detail, produce upon the mind of the beholder an impression of technical adroitness compared with which the effect of similar productions in England is both rude and crude. We must expect, therefore, to find, as the result of the Continental travel now so universally indulged in by people of the better class in England, a certain dissatisfaction with English architecture; and they who have at heart the progress of architectural design may be glad to find it so, and in every way disposed to encourage a discontent which promises to provoke improvement on such grounds.

But it would be a mistake to suppose that this puts the question in a practical form. We are inclined to think it is not as the result of comparison with foreign superiority that

any serious quarrel exists between English architects and the public. It is those classes of people who derive their critical principles from within rather than without who just now seem to make a complaint. It is not the study of highly-advanced examples that they proceed upon, but the supposed discovery of first principles by means of their own consciousness. Mr. RUSKIN is a typical example. He generalises, no doubt; and he does so with a marvellous felicity; but it is done in a way that is all his own. His opinion is not public opinion; his criticism is not expressive of the development of general taste. With him every word and every thought is personal, private, and peculiar. His imitators are legion; a few understand him more or less, the many do not understand him at all. The few are frequently troublesome to deal with; the many, much more frequently, are impracticable.

What is called a feeling for Gothic art in its general form has done more than Ruskinism to produce that so-called public opinion which is dissatisfied with the work of English architects. But the dissatisfaction of such critics with foreign architects is greater still. A quaint ideal of quite imaginary mediævalism takes in different minds different forms; and if modern work fails to come up to such a standard, how could it well be otherwise? What makes matters worse, the mediævalist element itself is now being supplanted by an influence which as yet is immature, and indeed amorphous—without form and void; and when discontent in such circumstances is wholly vague, and practical reform beyond the reach of skill, such conclusions are as certain as cause and effect can make them.

The popular ridicule of æstheticism is not a mere whimsical jest. It represents a legitimate reaction. It may be called common sense reacting against uncommon sense. Both are right; in fact, both are serious protests of public opinion, the one against indifference or old torism in art, the other against the affectation of a too sincere artistic red-radicalism. But there is a deeper movement which the thoughtful observer can see to be going on in English public opinion with regard to art, of which superficialities such as these convey but a feeble idea. The imaginative faculties and the critical acumen of the English as a nation are slowly but steadily acquiring the force of a great current of human culture; and not only the contests of doctrine about dress and decoration—far less the likes and dislikes of the world of burlesques and caricatures, comic songs and frivolous tales—but even the rival popularities of our picture galleries and curiosity shops, increasing as these are in number every day, and every day advancing still more notably in the money value of their contents, are less important to the public interest, and less worthy of the name and dignity of public opinion, than the quiet undercurrent of frequently unconscious and almost always undemonstrative general feeling which is giving a national complexion to the national taste.

Does architecture share adequately in this? Unquestionably it does. Indeed, it may be said to take a larger share of popular interest than is supposed. Graceful buildings can never fail to appeal to the sympathy of all classes. Where pictures and statuary, priceless articles of *virtu*, costume and ornamentation of the choicest elegance, and art manufactures of the most exquisite device and workmanship, are *caviare* to the multitude, a pleasing specimen of architecture in the public street is a tribute to the good taste of every passer-by—a tribute which even the most cynical, save in the way of academical criticism, must instinctively honour as it honours him. It is to the growth of the national disposition to encourage the everyday endeavours of everyday grace in building that we prefer to look for the advance of a real public opinion in respect of architecture, as distinguished from all those artificial and conventional standards of criticism which profess to represent the feeling of a nation, and only indicate the crotchet of a school. It cannot be denied that at the present moment, viewed from this standpoint, English public opinion upon architecture is weak and uncertain; but the arts, like all else, must bide their time, and the arts can afford better than most things to do so. Only let us be sure that the educated multitude of Englishmen and Englishwomen are learning the right lesson, and time will do all the rest. Differences there must be, jealousies, rivalries, disappointments, discords; but from these very elements it is that the evolution of art must choose its instruments, and by their means it is that it must attain its ends. Looking at what English architecture was—as a whole national product—even thirty years ago, and at what it is now, no one need complain of the pace



at which public opinion is acquiring that understanding of the art which, by encouraging the artist to exertion, compels the development of his powers.

## OXFORD.

[BY A CORRESPONDENT.]

THE late Royal Commission that was appointed by Government to examine into and rearrange the educational machinery and finance of the different societies or colleges that together form the University of Oxford, have proved themselves to have been good friends of the architect and builder. When the members of the several colleges had to assemble together that they might set their house in order, and be the better prepared to meet the dreaded investigation of the Commissioners, the question naturally arose, what was to be done with surplus funds—those monies that were evidently over and above that which they would be allowed to distribute amongst the members of their college, or offer in the form of exhibitions, &c., to the youth of the University? The Dons had no wish to hand over more of the funds belonging to their ancient societies than they could avoid to the manipulation of a Royal Commission whose existence they looked upon at least with disfavour, if not with aversion, as an insult and sign of distrust in their wisdom and capacity. They were therefore in a suitable frame of mind to consider favourably claims for improvements in their own premises and machinery that had for long remained acknowledged but neglected facts.

The absence of any proper building in which the University Examinations could be held, seemed all at once to startle them as a strange oversight. A liberal contribution was at once offered by each college from its funds towards supplying this great want. The result is that a stately pile of buildings, most commodiously planned, having its main façade in the "High," extends away back to King Street, the whole cost amounting to near the very respectable sum of 170,000*l.* This is an instance of the collective action of the colleges; but many of the individual societies have engaged in building on their own account. Colleges that for years had been content to send those of their "alumni" whom they could not accommodate within their own walls to the shelter of "licensed lodgings," at the prospect of the Commission saw the error of their ways, and determined to amend them by building new "quads" or wings to the ancient pile. College chapels, whose leading features from time immemorial had been dirty plaster, dingy windows, and a frowsy smell, were suddenly found to be unworthy of the high and holy use for which they were intended. Cleaning, restoration, and embellishment became the order of the day. And so the architect and artist, who up to that time had been only occasional visitors, took up a nearly permanent abode in this city of colleges.

Nor has the good work been limited to minor additions and restorations, for some colleges have been nearly rebuilt—such as Balliol and Exeter; and Mr. BUTTERFIELD has given us a brand new pile of buildings in Keble College. The Indian Institute at the end of Broad Street, the foundation-stone of which was laid not long since by the Prince of WALES with full masonic, collegiate, and civic honours; some new churches, the boathouse and lesser erections, all add to the varied feast offered by Oxford to the eye of an intelligent visitor. The city ought to be visited by young architects more often than it seems to be, for there is here plenty of food for thought. The best of their seniors have done work of various degrees of merit; and, as the clients for whom they have laboured have been no niggards, the architects have had a fair field and plenty of favour.

As the distance from town is so short—only one hour and twenty minutes by a good train—a young man (or even middle-aged for that matter) could scarcely spend a Saturday and Sunday better than by first making a sketching tour of the colleges, noting down by a few vigorous, clean, and decisive lines the many tit-bits and artistic groupings that are to be met with in, I may say, all the streets, lanes, and nooks and corners of the colleges. On Sunday he could be improved and delighted by some of the great orators and fine musicians for which the place is famous.

Having said so much about the general aspect of this ancient city, I will now descend to details and consider separately a few of the most important recent additions to Oxford.

Out of compliment to Londoners, let me commence at the end of the "High" nearest to them. Here we find Magdalen College and the bridge over the Cherwell. This same bridge has just been doubled in width, and is completed all but the laying of the roadway and the relaying of the tram-lines. This work is a great improvement to the "High" and to Magdalen College, as you can now get further away from the base of its beautiful tower, which is the glory of the city, and so group it in better with its surrounding trees and buildings. It was a thousand pities that the engineer of this bridge did not see his way to lower the altitude of the centre, as it so much detracts from the dignity and elevation of the tower and its accessories. Some excellent photographs have been taken of the Magdalen Tower from the opposite bank of the river Cherwell, far below the level of the bridge. Comparing these with others taken from the bridge roadway, the injury caused to one of the finest views in Oxford by the action of an engineer becomes painfully evident. Magdalen, take it all in all, is about the most complete of all the Oxford colleges. It is well situated at the bottom of the main street and on the bank of a river, and having plenty of land of its own—rejoicing even in a deer park—it is not "cabined, cribbed, confined," as so many others are, by the unpleasant contiguity of their learned neighbours. Part of this happy abundance of space has, very properly and effectively, been given up to trees. The row of fine elms that run between the gateway and the choir school gives a touch of nature that accentuates and enlivens the adjacent art. Since the completion of the college, about A.D. 1481, many changes have been made in the entrance gateway. The present handsome archway, built by PUGIN in 1844, superseded a rather elaborate Classical structure, of which there are engravings still extant, of very similar dimensions and construction, consisting of a circular-headed opening, having the tympanum filled with wooden fan tracery. The arch is flanked by coupled Doric columns, and over all a curved pediment, broken in the centre to receive a small open canopy enclosing a figure. As this gave way to PUGIN's, so PUGIN's gateway is doomed to be replaced shortly by something else; and eventually it will find a new home by a river, the Magdalen bank of the Cherwell. The new block of buildings designed by Messrs. BODLEY & GARNER, which forms half of a new quadrangle, has its main front immediately behind the row of trees already referred to, reaching from the PUGIN gate to the choir school. Here stood formerly the main part of Magdalen Hall, which was burnt down some time since. A small portion, which is one of the quaintest pieces of architecture in the city, stands in a line with the President's lodgings. The architecture of this new block is carefully based upon that of the old building. The front elevation contains eight main gables, besides dormer windows, a great amount of breaking up of the roof for a façade of no very great length. The effect would doubtless be fussy could the whole length be seen in one unbroken view from the High Street; but as the line of tall trees prevents this, and only occasional peeps of beautifully rich bits can be obtained here and there between the boughs, the general effect is most picturesque. So far the buildings provide accommodation for two sets of fellows' rooms and twenty-nine sets for undergraduates, with two lecture rooms. The fellows are accommodated on the first floor next to the main entrance, and below them are placed the lecture rooms. At the back of this end of the building rises a tower with angle turret staircase, terminating above in a richly crocketed spirelet or pinnacle similar to several of those in the old work. It seems a pity that this tower should be hidden away where it is. Had it been brought to the front it would have given variety to the long line of gables, enriched the neighbourhood of the main entrance to the college, and in no objectionable way have competed against the more ancient towers in its vicinity. Finely moulded open arches lead through the base of this tower, which forms a sort of groined entrance porch to the lecture rooms and fellows' lodgings. Over the front arch is an oriel window of two storeys, rich with carved panels and crested cornice. The top of the flanking buttresses is pierced with groined niches containing beautiful little figures. It is wonderful what a great difference there is in the artistic appearance of the same niche or canopy when empty or filled with a figure, even though the figure be but poor in design and execution. Of course it is not every day that architects come across clients whose pockets can "stand" the expense of figures. But should not architects more generally husband



their resources for one great effort about the entrance of their building or centre of the design, instead of frittering away the amount that they can allow themselves for carving, &c., in unnecessary mouldings and trivial decoration over the whole of their work? Messrs. BODLEY & GARNER have, in the present instance, the good fortune to be able to put their ornament, and as much of it as they like, on both the back and front of their work. In the quadrangle, or semi-quadrangle, the niches at top of buttresses are filled with figures as in the front. The main string-course at the back is one long row of large gargoyles and bosses of considerable size, about four or five feet apart. Carved panels also are frequent and elaborate. In fact, the carving tools have had full play, and have been handled with considerable fancy and skill. It is no slight tax on the inventive faculties of the designers to be able to say that, of the many hundred bosses to be found throughout the building, no two are similar.

The first gable facing the high road is enriched by a very tall oriel window of two storeys, that rises from an attached shaft on the ground-floor, from the cap of which spring groined ribs which catch the base of the oriel. The central space between the first and second floor windows of this oriel is taken up at the sides by two plain panels, and in the middle with a most spiritedly carved angel with spread wings. The oriel is finished above with a foliated cresting. The several parts of this oriel are good in themselves, but the effect of the whole is that of being too lanky and as though it were unfair to place so much upon such a poor little shaft. It looks, too, as if the whole were *appliqué*, or stuck on after the gable had been finished. This defect is caused by the main string breaking where the oriel occurs, instead of being run round it and binding it to the whole building. This treatment would have had the further benefit of cutting up the great vertical height of the oriel by the intersection of one bold horizontal line. In the case of the two-storeyed oriel on the quadrangle side of the Founder's Tower the base has a perfectly firm appearance, and there are two well-defined strings above and below the central or blank compartment. In other instances in these new buildings I differ from the architects in the use of the string-course. They are too ready to break the string by the upward passage of a buttress or the like, so losing horizontal bond. In the old quadrangle the string passes round the buttress, giving a very beautiful effect in perspective. In some cases buttresses that have passed the lower and minor string (which is a mere continuation of the hood-mould of the lower windows) run up for fifteen or twenty feet through the main string-course without any tie or connection with the walling. The result is that they look naked and lonely.

The two next bays to the corner one have wide shallow oriels, of one storey only, rising each from a similar wall shaft. Above and below these are windows, so that the whole gable looks rich and light. The dormer windows are little gems in their way, with their highly-wrought oak verge boards and quarry lights. The college authorities will not have quarry glazing in the sitting or lecture room windows, and I think that they are wise, as most of the windows run small, and there is a great amount of tracery in the heads. And I have something, too, to say about this same tracery. In most cases it looks too thick and massive. The section across any rib in the tracery appears to be as great or wide in section as the mullion from which it rises. Most Gothic men know that the ancients avoided the appearance of clumsiness in their tracery by making the curved or straight portions thereof less wide than the mullion to whose order it belonged. Again, in the matter of the shape of the arch used, the type common to the college has been adopted, the peculiarity being that, instead of being four-centred, as in the best specimens of the Perpendicular period, as soon as the small curve which commences the arch is finished the rest of the span is worked in a straight line. The constructive and artistic defect of this shaped arch is not so apparent in the old cloister windows, as tracery is placed below and the whole opening cut up into three lights; but when the tracery and mullions are omitted the result is distressing, the straight part of the arch, to use a paradox, actually appearing to droop or sag like a defective beam.

The chimney-stacks are very nice. They generally ride upon the ridge of the roofs in groups of four flues. Each chimney-top is fluted with rosettes or pateræ at intervals up the flute. Towards the top is a small necking, with carved cresting upon it.

Each student has, in addition to his sitting and bedroom,

a nice little pantry, where all his extraneous belongings can be kept. At the bottom of the staircase is a scout's closet. The staircase is of stone, and the floors are made fireproof. The fireplaces in each room, as well as the inner arches of the windows, are of moulded stone, and a stone plinth surrounds the tiled hearth.

I could say much more about these fine buildings, upon which no money or labour have been spared. Suffice it to mention that the stone used is of a fine yellow colour, from Staynton, good in texture, and known to have stood well in the past. Rotten stone has been the curse of Oxford. Witness Peckwater Quad, and the numerous black colleges whose outer skin is shaling off. The roofs are covered with Colly Weston stone slating. Mr. FRANKLIN is the builder, and Mr. McCULLOCH the carver. The cost is about 40,000/.

## ANCIENT LONDON.\*

THERE is some fitness in the publication of Mr. LOFTIE'S "History of London" at a house which is known for the excellence of its maps, topography having much to do with the character of the work. At present the metropolis has an area of nearly one hundred and twenty square miles. Roman London hardly included a square mile within its boundary; three centuries ago the area was less than three miles, and in the eighteenth century the area was not more than five square miles. From these figures it is plain that for a long period the growth of London was at a very slow rate, especially if compared with that of modern times; and when we understand the reasons for this difference, we are on our way to a knowledge of the history of London. The collection of maps in Mr. LOFTIE'S volumes, together with his disquisitions, form a trustworthy guide that can be followed with safety.

The word London suggests that the city was the site of a Celtic or early British fortress. PENNANT said it was derived from Llyn-din, the lake town or fort, and modern archæologists can discover no better explanation. Mr. LOFTIE prints a letter from the late GODFREY FAUSSETT, of Canterbury, in which he says: "I have never doubted what it was that the Romans turned into Londinum—to wit Llyn-din, the lake fortress. London was in those days emphatically a Llyn-din, the river itself being more like a broad lake than a stream, and behind the fortress lying the 'great northern lake,' as a writer so late as FITZSTEPHEN calls it, where is now Moorfields." It is now difficult to believe that a city which is a mass of buildings could at any time have been a swamp or lake, but with such a river as the Thames, which was fed by streams on both sides, and looking at the conformation of the ground, we can imagine that there were floods occasionally, and that in parts the water remained until it was absorbed. The highest ground would be selected for a cattle-pen and residence for the settlers. It is, however, doubtful what part of London can claim to be the site of the primitive Llyn-din. If we believe the inscription on the slab in Panyer Alley, the greatest height is to be found there; but, according to the Ordnance Survey, Cheapside is quite as high, while Cornhill stands one foot higher.

It must be confessed that at the time when the Romans invaded Britain they did not attach much importance to our metropolis. CÆSAR does not mention London. It was at one time believed that BOADICEA captured the city—and slaughtered the strangers—but the queen's deeds, like King LUD'S, are now treated as imaginative, and we have not met her name in Mr. LOFTIE'S volumes. Whatever may have been the value of the place, the rulers did not consider it necessary to enclose Augusta with a wall until the middle of the fourth century. According to HARRISON the wall was 3 miles 205 yards in length, and enclosed a space of 380 acres. The remains, which are dug up from time to time, are evidence that, limited as London was in those days, the Romans were surrounded with the things which make life elegant. It was described as "Londinum urbs magna et opulenta," and it appears to have had some claim to the second adjective if not to the first. There is, too, the authority of TACITUS for its mercantile importance. On the strength of this evidence some authorities would have us believe that London was a

\* "A History of London." By W. J. Loftie, F.S.A. With Maps and Illustrations, Edward Stanford.



Western Rome, and that both cities could trace their origin to descendants of ENEAS and VENUS. People now take a more sober view of things, and the modern spirit is seen in Mr. LOFTIE's conclusions. There was a Roman London, but we know little about it, and we cannot prove that it was the capital of Britain. What we do know is, "that far beneath the feet of the busy throng which presses every day the pavements of modern London, there lie buried the traces of an ancient city." It may be the task of the New Zealander of the future to exhume them.

The Romans were compelled to depart, and for nearly a century there is no record of London. The Britons of Kent fled to it from the Saxons, and the scared fugitives were unable to defend the Roman walls against the invaders. There appears to have been a great slaughter, and in course of time London is heard of as the chief town of the East Saxons. To them it was valuable from its position. As Mr. LOFTIE says:—"The Britons had lost the art of using walled cities; the Saxons had not acquired it. London was equally useless to both." But to the Saxons, as to people of a later age, the Thames was an acquisition, and, as STOW wisely remarks, London could not "be pitched so commodiously upon any other part of the same river of Thames as where now it standeth." London was probably esteemed by the Saxons as an excellent place in connection with expeditions that were somewhat piratical in character; but, fortunately for London, a new influence then began to be exercised. In the reign of ETHELBERT the Abbot MELLITUS was made Bishop of London, and a cathedral for him was erected at the expense of the Saxon king and his nephew, SEBERHT, the Essex prince. On the bishop's banishment, after the death of SEBERHT, London appears to have relapsed into heathenism. Christianity was re-established mainly through the exertions of ERKENWALD, Bishop of London. A charter which was granted to him bestowing some lands at Barking is to be seen in the British Museum. One circumstance is mentioned by Mr. LOFTIE which indicates how the old order of things gave place to new in those days. Bishop ERKENWALD is believed to have erected a gate at the northern entrance of the city, although STOW says the builder is unknown, and ever since the memory of it is preserved in the term Bishopsgate. We are told that "nothing can better show the decay of Roman roads and Roman gates than the fact that, though Bishopsgate Street leads from the bridge to the great northern road, the old line was not preserved." To this period may be traced the foundation of churches dedicated to the Saxon saints, BOTOLPH, OSYTH, and ETHELBURGA.

London in the ninth century ceased to be the chief town of a principality, and under EGBERT it became the capital of the Saxon kingdom. It had to suffer for its importance when the Danes arrived. Then it was captured by ALFRED, and his son-in-law, ETHELRED the Alderman, held it against all opposition. It was only a question of time, however, for the Danes were afterwards masters of London and of England as well. Some traces of their presence is to be found in churches dedicated to St. OLAVE and St. MAGNUS, and with less certainty in the churches of St. Clement Danes and St. Bride. WILLIAM of Normandy granted a charter to London, in which the exceptional freedom of the citizens was preserved. But by erecting the Tower he was able to control the river, which brought wealth to the city, and therefore the city itself. It is remarkable that London was excluded from Domesday Book, for what reason cannot be conjectured.

We obtain a picture of the city's condition in the following century from the description of WILLIAM FITZSTEPHEN, a monk of Canterbury, who was a native of London. Judging by the space occupied by his account of London sports, it would seem that the citizens were occupied with mysteries, tournaments, leaping, hunting, hawking, and other sports; and they were noted above all other men for their manners, dress, table, and discourse. But Mr. LOFTIE believes that some of the words suggest the existence of a darker side, such as the allusions to ill-government, immoderate drinking of foolish persons, and frequent fires. It would speak little for FITZSTEPHEN's gratitude if he did not speak well of the citizens. They were good friends to the Church. An imaginary map of London in the thirteenth century, introduced in Mr. LOFTIE's book, is remarkable for the quantity of ground that is appropriated to religious orders. The Greyfriars or Franciscans had a large piece at Newgate; near it was the Benedictine priory at Smithfield. The Blackfriars had property extending

from Ludgate Hill to the river. Then there were the Augustinians near London Wall, the nuns of St. Ethelburga, the Abbey of St. Clare, New Abbey near the Tower, &c., all occupying an extensive area. These houses, so far as is known, corresponded with religious houses now, and were independent of the parishes into which London was divided. According to FITZSTEPHEN London and the suburbs contained thirteen of the large conventual churches and 136 parochial churches. How these parishes were established is uncertain. There are still a great many of them, and the majority consequently are of small size. Their existence is, at the present day, an inconvenience which legislation has tried to diminish by amalgamating several of them, so as to provide a congregation. Mr. LOFTIE supposes that the existing parishes formed part of still larger parishes which were broken up. In Queenhithe Ward there are three adjoining parishes dedicated to St. MARY, and two have St. NICHOLAS for patron. Dowgate has Allhallows the Great and Allhallows the Less, and there are three parishes of St. Katherine. Such small parishes very likely had some community of interest, and the wards and trade companies also gave opportunities for association and for discipline. The order of everyday life is to be inferred from what FITZSTEPHEN records:—"The artisans of the several crafts, the vendors of the various commodities, and the labourers of every kind, have each their separate station, which they take every morning." The history of the civic associations has been investigated in modern days with zeal, and new light has in consequence been thrown upon the history of London. Mr. LOFTIE's chapters on "The Rise of the Companies" and "The Wards and the Companies" are among the most interesting in his work. Mr. LOFTIE does not attempt to give a chronological inventory of events which occurred in the great city. From the companies he passes on to the abbeys, convents, and other ecclesiastical companies. Then, after describing the London of DICK WHITTINGTON, we find an excellent chapter on SHAKESPEARE's London. Mr. LOFTIE says that when the poet "lays his scene in Illyria, or at Verona, or Messina, the watchmen are from London streets; the palaces are London houses; DOGBERRY himself is a tradesman upon Cornhill." But this is going too far. There is no dramatist of that age who seems to have drawn so little inspiration from London as SHAKESPEARE. We have only to compare his characters with JONSON's, or with those in "The City Madam," to see that the life of the citizens is not reflected in SHAKESPEARE's comedies. "The Merry Wives of Windsor" we can imagine to be a sketch from reality as respects some of the characters, but it has no counterpart with the citizens of Cornhill and Cheapside among the *dramatis personæ*. Why a man who in social position did not spring from a higher rank than BEN JONSON ignored the people who then lived in London, is a question well worth discussing, and a satisfactory solution of it would do much to explain the mystery that attends the production of the plays. But it could not be attempted in these pages.

In his next chapter Mr. LOFTIE has to relate, under the head of "The War, the Plague, and the Fire," events which might almost be said to have put an end to ancient London. During the five days' fire 396 acres of houses were destroyed, comprising 15 wards wholly ruined, 8 others half burnt, 400 streets, 13,200 dwellings, 89 churches, besides chapels, and four of the City gates. "The loss of property could hardly be estimated. It has sometimes been reckoned at between three and four millions sterling, but this is irrespective of inestimable things, such as monuments, libraries, records, and objects of personal value. London, in short, as a city, was obliterated from the map." It was soon to be recreated.

The first volume of Mr. LOFTIE's history deals with the City. In the second volume he treats of those parts of the metropolis which are outside the City boundary, and the author gives descriptions rather than a narrative. The interest of the two volumes is continuous, for in the second we have traced the growth of the existing metropolis, and the history of the Abbey of Westminster, the Houses of Parliament, the palaces, parks, on the western side, and of the Tower on the east; while the suburbs are described from Chiswick to Stepney, and from Highbury to Kennington. EDMUND BURKE once defined London as "an endless addition of littleness to littleness, extending over a great tract of land;" but there is sufficient human interest about the place to inspire a great many writers, and among their books Mr. LOFTIE's must hold a high position.



## PARIS NOTES.

ART frauds are occupying much of the time of the French law courts. The Corot-Trouillebert suit is still pending, and another affair of the same kind has come up during the past week. A son of M. Huet, the landscape painter, saw exhibited in the shop of a picture dealer in the Faubourg St. Honoré, one of the most important thoroughfares of the capital, a painting marked Théodore Rousseau, which he recognised as one of his father's works. It had formed part of a sale which took place in 1878, when it appeared in the catalogue as No. 83, *A Study near Meaux-en-Brie*. He entered the shop to examine the picture under the pretext of purchasing it, and the dealer assured him that it was a real Rousseau. He saw, however, that his father's signature had been effaced, the letters "Th. R." inscribed in its place, and the name Théodore Rousseau in full added on a tablet on the frame. At the back of the picture was a ticket imitating that of the Rousseau sale, and covering the ticket which had indicated that the picture formed part of the sale of Paul Huet's works. The son had the painting impounded, and applied to a judge in Chambers to have a receiver appointed until the hearing of the suit he has commenced to have his father's name restored.

The Civil Court of the Seine gave judgment on Saturday last in another action relative to the authenticity of a group attributed to Clodion, which had already come before the same Court in January 1880, and before the Court of Appeal in April 1882. On the last occasion experts were appointed to examine the work in question, which was represented to be "a Faun, Bacchante and Child," in terra-cotta, by Clodion. The plaintiff was Madame Bernage-Boiss, a dealer in curiosities, who in 1873 purchased the group of M. Mailliet du Boulay, Conservator of the Museum of Antiquities at Rouen, for 12,000 frs. She demanded that the sale should be annulled, on the ground that the signature of Clodion at the back of the work had been inserted and painted over to imitate the colour of the group. M. du Boulay called into the suit a M. Demère, from whom he had purchased the work for 4,350 frs. in 1872. On the report of the experts, who were the well-known artists, Messrs. Guillaume, Chapu, and Aimé-Millet, the Court found that the allegations of the plaintiff were proved, ordered both sales to be cancelled, condemned M. du Boulay to reimburse to Madame Boiss the 12,000 frs., with 5 per cent. interest since 1873; and Demère to refund to Du Boulay 4,350 frs., with interest since 1872, besides bearing all the costs of the case, which are extremely heavy.

The second exhibition of portraits of the century, which it was proposed to hold for a charitable purpose, has had to be abandoned, the committee not having been able to secure suitable premises. Its president, the Marquis de Montemart, has therefore issued a notice thanking those persons who had promised to send pictures, and expressing the hope that he may be enabled to avail himself of their offers next year.

The French painter, Henri Gervex, has just received the Cross of the Order of Leopold. The distinction has been conferred upon him in connection with the Ghent Exhibition, to which he sent his *Bureau de Bienfaisance*—a painting much observed in last year's Salon.

M. Auguste Vaudet, the engraver on precious stones, has been entrusted by the Minister of Public Instruction and Fine Arts with the engraving of *Le Départ des Volontaires de 1792*, Rude's magnificent work on the right side of the Arc de Triomphe. The minimum time required for the work will be six years, and the sardonx upon which it is to be executed ranks in point of size with the four or five largest engraved stones known, of which the biggest of all is in the collection attached to the French National Library.

Mercié's fine group, *Gloria Victis*, formerly placed in the Square Montholon, and the *Dernières Funérailles*, by Barrias, have just been erected on pedestals in the Cour Louis XIV. of the new Hôtel de Ville. The former, which is in bronze, occupies the centre of the court, while Barrias' marble stands under the gallery, before the door of the Salle des Pas-Perdus. It has been decided to place the two lions by Cain, belonging to the Municipality, one on each side of the Place Lobau entrance to the Hôtel.

In the quarterly competition for figures drawn from nature the jury of the Ecole des Beaux-Arts, under the presidency of M. Bouguereau, have awarded the first medal to M. Fossey, pupil of MM. Bouguereau and Tony Robert-Fleury; the second to M. Léandre, pupil of MM. Bin and Cabanel; and the third to M. Eliot, who has been studying under the same masters.

There seems at last some prospect of the ruins of the Cour des Comptes, on the Quai d'Orsay, being replaced by a new Museum of Decorative Art, which, under the scheme that appears likely to be adopted, would in fifty years become the property of the State. The expenditure on the building alone is estimated at 6,000,000 frs., which sum is already deposited at the Bank of France, and the promoters of the institution ask for the concession of the site on the Quai d'Orsay, which will doubtless be granted.

The statue of Alexandre Dumas the elder, by Gustave Doré, unveiled a few weeks ago on the Place Malesherbes, threatens to give rise to a lawsuit. A bronze tablet on the pedestal enumerates the works of the novelist. Among these is named the melodrama "La Tour de Nesle," about the authorship of which there was formerly much dispute, although it is now generally admitted that the play was principally by Frederick Gaillardet. During Dumas's lifetime, in fact, it was arranged that his name should only follow that of Gaillardet as co-author. As no mention whatever is made of the latter in the list above referred to, his widow has served a writ on M. Halanzier, late Director of the National Opéra, and a prominent member of the Erection Committee, calling upon him either to have "La Tour de Nesle" effaced from the tablet within fifteen days or to add the name of her husband as joint-author of the piece.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE sixth ordinary meeting of the Institute was held on Monday evening, Mr. Ewan Christian, vice-president, in the chair.

After the minutes of the previous meeting had been read and confirmed, a member rose and remarked that the present was the first meeting since the allegations against the profession contained in *Truth* had been brought officially before their notice. He asked whether it would not be fitting to pass a resolution repudiating those allegations.

The SECRETARY asked if notice had been given of the question. If notice had not been given the question could not be put, the business of the meeting being the reading and discussion of a paper.

The member replied that he had not given notice, but he thought the matter was so important that a deviation from the rule should be allowed.

Mr. E. C. ROBINS, F.S.A., considered it would be making too much importance of the matter to take any notice of the allegations.

Professor KERR said that far too much had been made of a matter which was unworthy of the slightest notice.

The CHAIRMAN having ruled that the matter was beneath the notice of the Institute, the reading of the paper was proceeded with.

**The Action of Lightning Strokes in regard to the Metals and Chimneys of Buildings.**

Colonel the Hon. ARTHUR PARNELL, late R.E., then proceeded to read portions of a lengthy and elaborate paper under the above title, of which the following is a brief abstract:—Colonel Parnell prefaced the paper with a sketch of his plan. He deemed that the best form in which to present his case to a body of practical men like the Royal Institute of British Architects would be to make the heart of his essay a mass of hard facts, associating with these facts an analysis separating and classifying the more important circumstances and phases of action recorded in connection with the lightning strokes, and to supplement the whole by a brief commentary. The paper was the fruit of his research during the last four years into the nature of the action of thunderbolts. The cases, 506 in number, were picked out from a collection of recorded instances of lightning strokes, 1,145 in all up to date, occurring between January 24, 1665, and November 23, 1883. The selected cases embraced those only in which buildings were concerned, and in which metals or chimneys were described as present in the immediate neighbourhood of the scene of the stroke. The rest of the prefatory matter detailed the principles kept in view and the methods followed in indexing the records. Among the selected cases the following fifty occurred, namely:—

(43) Swinton, Eccles, near Manchester, August 6, 1809, Mr. Elias Chadwick's house. Adjacent was a brick coal-shed, above



which was a cistern, with flagged top, bottom, and sides. Foundation of shed a foot below ground. Its walls were strengthened by bond timbers. Effects: Wall of shed slightly shifted from upright, the copings remaining entire. Bond timbers driven further than brickwork, and looking scorched. Weight of displaced material 26 tons. Metal spout, brackets, and leaden water-pipe uninjured. (92) Parish church of Week, St. Mary, Cornwall, November 8, 1878, the tower of which had been struck in 1688, 1812, and 1843. Details of latest disaster from the Rev. G. Hopkins, rector, and Mr. J. P. St. Aubyn, F.R.I.B.A. (102) St. Michael's Church, Stamford, August 14, 1857. Pinnacled tower. At base of south-east pinnacle and 3-inch iron rain-water pipe entering the earth. The effect of the discharge was to uplift the whole mass, imparting to it at the same time a kind of circular motion to the southward, the apex of the pinnacle falling in a line with its original base, and the base having traversed about the eighth part of the circle fell into the root of the tower. The pinnacle was a mass of masonry bound by iron clamps, and weighing about 15 cwt. (110) Nash Low Lighthouse, August 31, 1852. Description from Professor M. Faraday. (116) Villa at Cannes, France, about 1874. High position, but a much higher villa and on higher ground within 100 yards untouched. The remarkable details of the effects of the discharge were given from Mr. H. R. Dugmare, who was in the house at the time. (120) Berehaven Lighthouse, February 1877. The stroke doubtless a multiple one. Particulars taken from report of inspection to Irish Light Office, Dublin. (121) Upwood Gorse, Caterham, Surrey, May 28, 1877. House of Mr. J. Tomes, F.R.S., the highest object in the neighbourhood, with steep tiled roof. Details reported by Mr. Rogers Field, M.I.C.E. (136) Brónó Church, Norway, October 17, 1872. Had a lightning-rod of iron or zinc wire, which, however, was rusty at junction with ground. The stroke wholly destroyed the church. (173) Wheatland, Indiana, U.S.A., April 2, 1879. The school-house. Had iron lightning-rod with earth connections. House wholly destroyed. (187) Edgehill, June 20, 1821. House of Mrs. Clare, named Edgevale. The curious and instructive details of the mischief done by the stroke given in the order adopted by Mr. Howard in his description. (231) Ardersics, near Campbelton, September 1, 1824. A house occupied by Miss Bremner. Howard's order of effects of the stroke followed in this case also. (271) Streatham, June 12, 1748. Mr. Howard's public-house. Effects of the electrical discharge taken from paper by the Rev. H. Miles, D.D., in *Phil. Trans.* xlv. 383. (273) Trythal, near Mælpæ Hill, Cornwall, December 20, 1752. Mr. Thos. Olivey's farmhouse. Effects of stroke detailed by the Rev. W. Borlase, M.A., F.R.S., in *Phil. Trans.* xlviii. 86. (279) Lostwithiel, Cornwall, January 25, 1757. Parish church. Copious particulars given from *Phil. Trans.* l. 198, and *Gent. Mag.* xxviii. 427. (286) Pembroke College, Oxford, June 3, 1765. Authority from detailed account of catastrophe, Mr. Griffith in *Phil. Trans.* lv. 273. (288) St. Keverne's parish church, Sunday, February 18, 1770, struck during service. Particulars of case given by the Rev. Anthony Williams, vicar of the parish, in *Phil. Trans.* lxi. 71. (290) Whitfield's Chapel, Tottenham Court Road, London, March 18, 1772, a Sunday, the part struck being an addition made to the original building, and less lofty. A man sitting on a ladder lying flat on the ground, with his back against the chapel door, was killed. Record by Mr. Henley in *Phil. Trans.* lxii. 131. (294) Gais, Appenzel, Switzerland, 1873. The village much subject to thunderstorms. Every house had iron lightning-rods on it, varying in number from two to eight. Two chalets, each defended with two, were burned to the ground. Authority, Dr. Williams, in *Journ. Roy. Met. Soc.* ii. 432. (310) Salford, August 6, 1849. Works of W. Collier & Co., machine makers. Boiler chimney, fitted with iron lightning-rod, struck. Details from Mr. Wm. Sturgeon, in *Proc. L. and P. Soc.* Ser. 2, ix. 60, after examination. (321) St. Mary's Church, Crumpsall, Manchester, Jan. 4, 1872. Circumstantially recorded (*ibid.* xi. 70) by Mr. Henry Wilde. (323) St. Paul's Church, Kersall Moor, Manchester, summer of 1863. Mr. Henry Wilde reports this case also (*ibid.* p. 72). (346) Government House, Calcutta, March 30, 1838. Details quoted from Dr. O'Shaughnessy, M.D., F.R.S., in *Phil. Mag.* xxiii. 177. (348) West Street, Whitechapel, London, July 26, 1849. Three houses on south side of street, Nos. 17, 21, and 22. At No. 17 a man, who was opening the door at the time of the discharge, was killed on the spot. At No. 21 a woman working at a silk-winding machine was hurled across the room. She had a spindle in her hand at the time. Details quoted from Mr. W. Radcliff Birt in *Phil. Mag.* xxxv. 161. (387) Sheffield, June 5, 1879. House of Mr. Osbaldistone described (with details of damages to the extent of 500*l.*, resulting from its being struck by lightning) by Mr. Newall, F.R.S., in *Nature* for June 12, just a week after the event. (388) St. Marie's Church, Rugby, June 5, 1879. Mr. Howard (III. 161) furnishes the details. (398) Lumley, near Chester-le-Street, Durham, June 9, 1883. The "Old Hall," an old stone house, in dilapidated condition, at about the highest part of the village. The effects of the stroke investigated by the colonel himself from floor to floor, roof and chimney stack, three days after the disaster, and when it was as yet unknown (the doors having been locked) that any harm had been done inside. (446) Leeds Prison, July 12, 1883. Inspected by Colonel Parnell,

at the instance of the Hull Prison Commissioners, a fortnight afterwards. (469) Lichfield, a vicarage struck, July 2, 1883. Details from Canon Curteis, M.A., in *Morning Post* (July 14, 1883). (549) St. John's Church, Bury St. Edmunds, May 1871. Spire 160 feet high, built of Suffolk brick, with a copper lightning-rod, which did not avert the catastrophe. (559) Furze Hill, Brighton, June 1868. A detached school. (567) Ripponden Church, October 1873. The lightning, in spite of conductor, if not under its guidance, melted the leaden section of the gas-piping, and ignited the gas at the meter. Had not a woman given the alarm, the woodwork in the tower must have been destroyed. (575) Claypolds, near New Bridge, Middlesex, August 19, 1876. House of Mr. Evans. Details from paper by Mr. Anderson, read at Dublin Congress, 1878. (669) Dusseldorf, January 11, 1815. Tower of St. Lampert struck, though provided with an iron lightning-rod. The point of the rod melted and the building caught fire. (670) Berne, May 14, 1820. A private house, with iron conductor fixed to a wooden pole near two chimneys, was struck, the flash filling all the rooms with a dazzling light. The ground was raised round the post of the rod, whose lower end showed traces of red heat. Three persons in the house were knocked down senseless, and other mischief done inside in the house. (680) Koppingen, Switzerland, June 5, 1819. House of Mr. Anderegg, a wooden one, was not saved from lightning by its iron conductor, with its two brass-pointed terminals skywards, and its leading into moist earth. The house was fired, and the brass points vanished. (704) Farmhouse at Bucklawren, two miles from Looe, Cornwall, struck June 26, 1756. Details of the disaster from *Phil. Trans.* 1757, and *Gent. Mag.* xxviii. 157. (860) Alphington Church, near Exeter, June 1826. Tower with pinnacles, bells, and weathercock. Lead roof with spouts. One person, with an iron hammer in his hand, was killed by the stroke, another was hustled many yards into the church, and the clothing of four was torn. The tower stairs were torn up, some heavy stones removed, the communion table dashed to pieces, and the whole building shattered. The tower wall was rent vertically, the bells were thrown out of gear, and the vane got twisted. (916) Newbury, New England, North America, 1755. Details from Benjamin Franklin, the inventor of the lightning conductor. (942) Toothill, Essex, June 18, 1829. A windmill. The stroke tore up the stones and gravel near the iron braces under the roundhouse stairs, as well as the floor of the lower room, and threw some iron weights into the yard. It welded into a solid mass the links of the iron chain used for drawing up the sacks, and utterly stripped off the iron-plated roof of the building. Howard (III. 321) and others were quoted for these and the rest of the details. (951) St. Martin's Church, London, July 28, 1842. The particulars of this well-known case were given from the Annual Register and other chroniclers of the time. (952) Brixton Church, London, struck April 28 in the same year. The church was again struck in July 1872. Details by Harris, 86. (955) Normanhurst Court, near Battle, Sussex, July 1880. The description was given after Mr. R. Anderson (*Tel. Journ.* October 1, 1880). (958) Hôtel des Invalides, Paris, June 8, 1839. M. Bugnot, Inspector of Works, gave a full account of the catastrophe in the *Comptes Rendus*, viii. 978. (967) Steeple Acton Vicarage, Wiltshire, June 20, 1772. Details by Mr. E. King, F.R.S., in *Phil. Trans.* lxiii. 231, and Harris 112. (1029) Bruntcliffe, Yorkshire, August 6, 1878. A small powder store, connected with Victoria Colliery, holding 2,000 lbs. of powder. Fitted with a copper lightning-rod fixed to a pole about 2 inches from one end of building by glass insulators. Point surmounted building by 13 feet. A heavy iron door at end, remote from rod not connected to the ground nor to the rod. Powder fired and store blown up. Two little girls 320 yards off wounded by falling *débris*, and adjacent buildings damaged. Case reported by Hill, Inspector of Explos., 17, 9, 78, L. R. C. 74. (1032) St. George's Church, Leicester, August 1, 1846. Copious details from Mr. E. Highton, C.E., who examined scene (*Journal of Soc. Arts*, 1846), and Anderson (177), who quotes Mr. C. Tomlinson, F.R.S. (1079) East London, South Africa. A powder magazine with an iron lightning-rod ending in a dry water-tank. Effects of stroke:—Building much damaged, rod "torn to pieces" (*Journ. Soc. Tel. Eng.* 12, 5, 75). (1080) Coast of Ireland, March 13, 1844. A martello tower, containing powder magazine, struck. Description, with accompanying plan, by Col. R. J. Nelson, R.E., in *Aide-Mémoire* to the Military Sciences, I. 391. (1116) Manayunk, Philadelphia, summer of 1871. The "Pekin" woollen works, though provided with lightning-rods, set on fire and burnt to the ground. Total estimated loss, 10,000*l.* Reported on by Professor John Wise, of the Wagner Institute.

The paper also contained an exhaustive analysis and marshalling of facts in groups, with pertinent and weighty remarks as to their evidential bearing, especially on the problem of the relative liability of houses with or without conductors to be struck by lightning, which, it was argued, must be solved in a sense adverse to Franklin's invention.

The concluding portion of the paper was devoted to "Practical Deductions," and this portion the author proceeded to read. Premising that he wished especially to guard against advising the members of the Institute to take any measures at all to safeguard buildings from thunderbolts, a matter wholly, in his opinion, for



the architect, the owner, or the occupier, the measures he proposed were meant simply as precautions prescribed by experience as likely to do good so far as concerned metals and chimneys. His general principle was that the use of metal in any form, whether outside or inside a building, should be minimised. He boldly condemned, as wholly useless, metallic external appliances—(1) lightning-rods; (2) vanes, weathercocks, finials, crosses, balls, and spindles; (3) bells and clocks in towers and in elevated parts of buildings; (4) iron ridge castings; (5) metallic balconies. Inside the buildings he condemned as useless the employment of metal in the instances of (6) large chimney-glasses; (7) gildings. As to handy metallic appliances, external and internal, a dozen numbered rubrics followed, with suggestions of substitutes in earthenware, terra-cotta, Portland cement, glass, or asphalt; failing which, hints were thrown out for eliminating, or more or less reducing, the peril. The items (Nos. 8–19) were—chimney-pots; flashings, hips, and other lead-work on roofs; eaves-gutters and rainwater pipes; wire guards to stained windows; tie-bars, cramps, and hoop-iron bond; copper nails for slate roofs; iron window-bars; gas pipes; roof-framing inside; flooring; organs, pianos, safes, and iron bedsteads; water-pipes. Special cases were those buildings, the bulk of which is necessarily metal, such as gasholders, oil tanks, great railway stations, and temporary erections of corrugated iron. The precautions to be taken in these instances consisted in metallically connecting the ironwork frame to the ground at one or more places, and in providing its most elevated metals with short spikes very sharply pointed, thus converting the metallic mass into an electric tap ready to eject the whole charge that may accumulate in the ground near its base in virtue of the physical property of metal points to throw off and scatter electricity. This property seemed to have been discovered by Mr. Thomas Hopkinson, an American gentleman, in 1747. He communicated his discovery to Benjamin Franklin, who, in his letter of September 1 in that year to Mr. Peter Collinson, F.R.S., was the first to publish it to the world. It suggested to Franklin his lightning-rod, which the inventor made known in 1752, and which the European *savants* explained, in accordance with scientific theories then current, as a conductor of a supposed “electric fluid” darting from the clouds into the earth. They practically ignored original conception of it as an electric tap, as did the proverbially practical Franklin himself, who never troubled himself about the theory of his invention.

Passing to the precautions necessary in regard to chimneys, Colonel Parnell insisted that, as in the instance of the metals, the best plan theoretically was for buildings to be erected without them. But chimneys being a necessary evil, the endeavour must be to render them as nugatory as possible, and to deprive them, so to speak, of their sting, by tapping the ground beneath them of its superfluous electricity. To this end he suggested (1) that the metal-work on the lowest floor should be connected to the soil below by means of two iron bands, one at each side, securely rivetted to the foot of the grate's front and passing down through the hearthstone and the rubbish or concrete underneath about a foot into the actual soil. (2) It was proper to fix securely and closely to the top bar of the grate two iron spikes 3 inches long, one at each side, close to the cheek of the fireplace, and leaning back obliquely towards the flue at an angle of 45 degrees. The spikes should be very sharply pointed with steel, and should be always kept sharp.

In conclusion, Colonel Parnell urged architects to make the study of the physics of lightning-strokes a part of their professional business. There seemed to be no reason why they should not. The known laws of electro-statics were of the simplest kind, and their comprehension did not involve a tithe of the mathematical knowledge needed in studying mechanical science. Enough knowledge of lightning-strokes to enable an architect to safeguard a building against them was easily learnt from nature alone. It did not belong to the electrical engineer, whose province was artificial electricity. The defence of life and property from lightning seemed to rest on the labours of three classes of scientific men. The first were the meteorologists, who observed the phenomena of thunderstorms. Next came the physicists, who reasoned on the facts, and eventually deduced therefrom theories and laws. Lastly, architects practically to apply the reasonings of the physicists.

Mr. SYMONS said he had not expected to be called on to speak, and remarked on the lateness of the hour. He then went into the subject of Colonel Parnell's paper at length. The paper, he said, had almost taken away his breath, and he had begun to wonder whether we had not suddenly gone back a century. Mr. Symons next went through a long list of buildings that had been struck and injured by lightning where conductors had been fixed, and the purport of his remarks was to show that in every case something had been faulty and defective with the conductors or the earth connections.

Professor ADAMS followed the same line of argument, and quoted statistics which he considered sufficiently showed the value of lightning conductors as safeguards from injury or damage by lightning. It was to be borne in mind that electricity always chose the path that offered the least resistance, and that if conductors were not so carried as to provide the easiest path, the

electric current would leave the conductor and not improbably do damage.

Professor HUGHES said the paper was like a long list of shipwrecks caused by rudders or safety valves. When the matter, however, came to be analysed, the truth was found to be that the rudders and safety valves were not in proper order. A conductor should always afford the shortest path for the electric current, and in the next place there must be a proper earth connection, often a matter of some difficulty to get. Earth plates no doubt were costly, but they really ought to cost more than conductors. If all proper precautions were taken he did not think it was possible for lightning to injure a building.

Mr. SLATER proposed a vote of thanks to Colonel Parnell for his paper. That gentleman had been considerably sat on by the previous speakers; but he (Mr. Slater) thought that, whatever their opinions might be, and considering they were only on the threshold as regarded their knowledge of the subject, that they ought to be much obliged to Colonel Parnell for having brought the paper before them. In the course of his remarks, Mr. Slater adverted to the danger that lightning, when traversing the eaves' gutters, would jump to the ground at the angles of the building rather than pass sharp round the corners. It seemed to him that connections should be formed at all angles, and this could be done by carrying down the gutter pipes at the corners of the building.

Mr. VYLE having made some remarks, the vote of thanks was unanimously passed to Colonel Parnell.

Colonel PARNELL, in reply, said he could not expect views which departed from the usual beaten track to be taken up with alacrity. He was thankful for the criticism his paper had met with, which was far more preferable than having it hushed up with faint praise. At the same time, he reminded his audience that they had heard next to nothing of his paper. He had quoted no authorities in support of his opinions and deductions, but they must not think there were none. He had approached the subject as a student, and his studies had been made from the transactions, data, &c., furnished by electricians, &c. What he would ask them was to carefully read through his paper, and then form their own opinion on the evidence laid before them.

Professor KERR asked if the members might expect to have the paper printed and in their hands about the month of July.

The SECRETARY replied that it would be issued in April.

Professor KERR having made a remark showing that he did not appreciate the wisdom of keeping papers from the members till everybody had forgotten all about them, the proceedings terminated.

## THE VENTILATION OF BUILDINGS.

A MEETING of the architectural section of the Glasgow Philosophical Society was held on Monday night, when Mr. W. F. Salmon read a paper entitled “Some Observations on the Ventilation of Buildings.” He said that if the public looked to any as guides in this manner it was to architects, and that very properly, for every building had its peculiarities of site and construction, with which the architect only was fully conversant, and without his aid a specialist in ventilation could not be expected to deal with the matter. Of late many inventors had produced curiously-shaped and cunningly-devised contrivances to extract foul air from enclosed places, but he was going to endeavour to show that the leading principle in all of them was known and understood before the dawn of the present century. He believed that if a record of their plans was kept by architects, along with notes of their experience of them, after due trial they might look forward with more hopefulness into the future, and calculate, ere long, on receiving good ventilation. Proceeding to consider the principal divisions of the subject—(1), the admission of fresh air; and (2), the extraction of vitiated air—Mr. Salmon quoted a series of interesting extracts from the leading authorities on ventilation, and pointed out that it was quite possible for them to make a wrong use of scientific data. Science and practice were two distinct things, and the sooner this was recognised in the matter of ventilation the better. A series of diagrams and plans having been shown and explained illustrative of several systems of ventilation, he said that if once it was known that the architects were in earnest about the matter, and were step by step mastering the difficulties with which it was beset, the public would support them, and with great willingness pay for a supply of fresh air. But, in the meantime, they were only on the threshold of the subject, chiefly, he believed, on account of want of authenticated tabulated statements of results. After a discussion on the paper had taken place, Mr. Salmon was awarded a vote of thanks.

Mr. F. J. Furnivall has been granted a pension of 150*l.* a year, in recognition of his researches in old English literature. As founder and director of the Chaucer Society and the New Shakespeare Society, and as a worker for the Early English Text Society and other bodies, Mr. Furnivall's labours have been long, arduous, and unremunerative, and the announcement of his pension will be generally welcomed by students.



## NOTES AND COMMENTS.

THE Office of Works has set the praiseworthy example of inaugurating important public works without the customary orations of mutual admirers. On Monday last the Prince and Princess of WALES opened the triumphal arch which used to carry the Wellington statue, and is now set up in another position. The occasion was, so, to speak, a recognition of the improvements which have been carried out at the instance of the First Commissioner of Works. But the simplicity of the ceremony could not be surpassed. The gates were closed by the police inspector, who regulates the traffic, to enable the Prince and Princess to hear a short account of what had been done. The officials and contractors were introduced, a few gracious words were spoken, then the gates were opened, and without flourish of trumpets or subsequent dinners or speeches, an important work was dedicated to public use. The re-erection of the arch has been carefully completed, and there are few signs of patching visible even on the shafts of the columns. But it is a pity that the opportunity was not taken to re-dress the ashlar near the pilasters of the front. The tooling is disgraceful and is now more apparent than formerly. It would also be an advantage if the massive gates had been painted a better colour, and partly gilded.

WE trust that the Metropolitan Board of Works will not allow Sir JOHN STEELL'S statue of ROBERT BURNS to be fixed on the Thames Embankment until the opinion of qualified persons on the merits of the work has been obtained. It is understood that the statue, which is now being cast in Edinburgh, is a copy of the figure by Sir JOHN STEELL which has been placed opposite the Albert Institute in Dundee, and which is a replica of one in New York. If so, we need not hesitate to say that, defective as are so many of the London statues, there is not one among them having so ungainly an appearance as that figure. It is said that the sculptor has revised the design, but with so unfortunate a pose no revision will make the statue presentable, or convert contortion into beauty. Sir JOHN STEELL has produced most excellent works in his time, especially equestrian figures; but as HOMER sometimes nods, great artists occasionally fail, and there is no use that we can see in again and again reproducing their failures. BURNS is one of the last men of whom an effigy should be set up for public derision in an English thoroughfare. BRUNEL'S statue on the Embankment is quite enough, without a companion to suggest the decline of the sculptor's art in Great Britain. Let Sir JOHN STEELL be commissioned to make an entirely new figure, if London must have its statue of the poet, but let BURNS, and not a stump of a tree, have most prominence.

THE gallery of casts will be a valuable addition to the South Kensington Museum. It adjoins the new gallery containing Indian and other textiles, and in height it corresponds with the Architectural Court. At present this part of the Museum is closed in the evenings, as provision has not been made for artificial lighting. But in the day-time there is no want of light in the sculpture gallery, and the details of the casts are to be seen most closely. The walls are coloured an orange red, against which the white casts stand out well. There is a gallery around the court, the front of which will be made up of metopes from the Parthenon and other temples, placed continuously; and above on the walls will be some of the older examples of work in relief, including the best of those discovered in the German excavations. The Parthenon frieze has an important position on the lower part of the walls. All the casts of statues have been carefully made, and the extreme whiteness will probably be an advantage in the eyes of the general public. There are a few niches in which the principal figures will be placed. It would be premature to give an opinion on the selection, as the works are not yet arranged; but from what we saw it appears to have been guided by judgment, although some archæologists will wish for more of the archaic figures.

THE last volume of the "Transactions of the Institute of British Architects" has been the subject of a long article in the *Literarische Rundschau* (published at Würzburg) by the well-known Dr. A. REICHENSBERGER, of Cologne, member of the Imperial German Reichstag, and who is also a foreign member of the Institute. The learned Doctor remarks that the Insti-

tute is a fine example of what voluntary activity can effect, and that the noble profession still flourishes in England, as it appears to have done in the Middle Ages, without the aid of any State department with an army of costly and officious functionaries. This is evidently a hit at the system in force in Germany, where an architect who does not care to limit his sphere of action to designing and directing his own private building operations, is compelled to undergo a great loss of time and energy, in going through an almost useless State examination before he is permitted to compete in designing public or other buildings which may be openly contested for. Dr. REICHENSBERGER gives lengthy extracts from some of the leading papers, with a summary of the work of the Institute, and dwells with some feeling on the very different practice prevailing in this country, where every professor of the art is free to enter into competition for the greatest building projects. The Doctor concludes with the hope that his review will not only be valuable for the information it diffuses, but that it will be an incentive to introduce in his country the benefit which the Royal Institute is supposed to be to architects in England.

THE new picture *Anno Domini* has received a larger share of adverse criticism than it deserves. It was meant to be a popular picture, and it well attains that end. Mr. LONG is not skilful in depicting emotions, and he has wisely arranged the figures in a way that gives scope for the representation of the graceful figures and handsome faces of a vast number of girls. We see a long-winding procession from an Egyptian temple, with dancers in the front. As the idols pass, the few people who are on the route kneel in worship, but their faces are not to be seen. In some mysterious way the Holy Family, with their ass, have been allowed to pass through the procession or across it—a feat which would be difficult on such an occasion—and form the middle part of the foreground. The importance of the group is apparent at the first glance, and it is evident that great care has been taken in the painting. The group deserves to be made the subject for a special engraving. The figures have dignity and gentleness combined, and appear to pass on their way without a thought of the pageant that is near them. If this group had been painted by a foreign artist it would have secured universal applause. In the left corner a negro is seen selling small idols and charms. Close to him are a woman with a sick child, a girl who allows her lover to present her with a necklace, and some other figures. With the exception of the crying woman there is not a part of the picture on which the eye cannot rest with pleasure, and, considering the large size of the canvas, this is saying much.

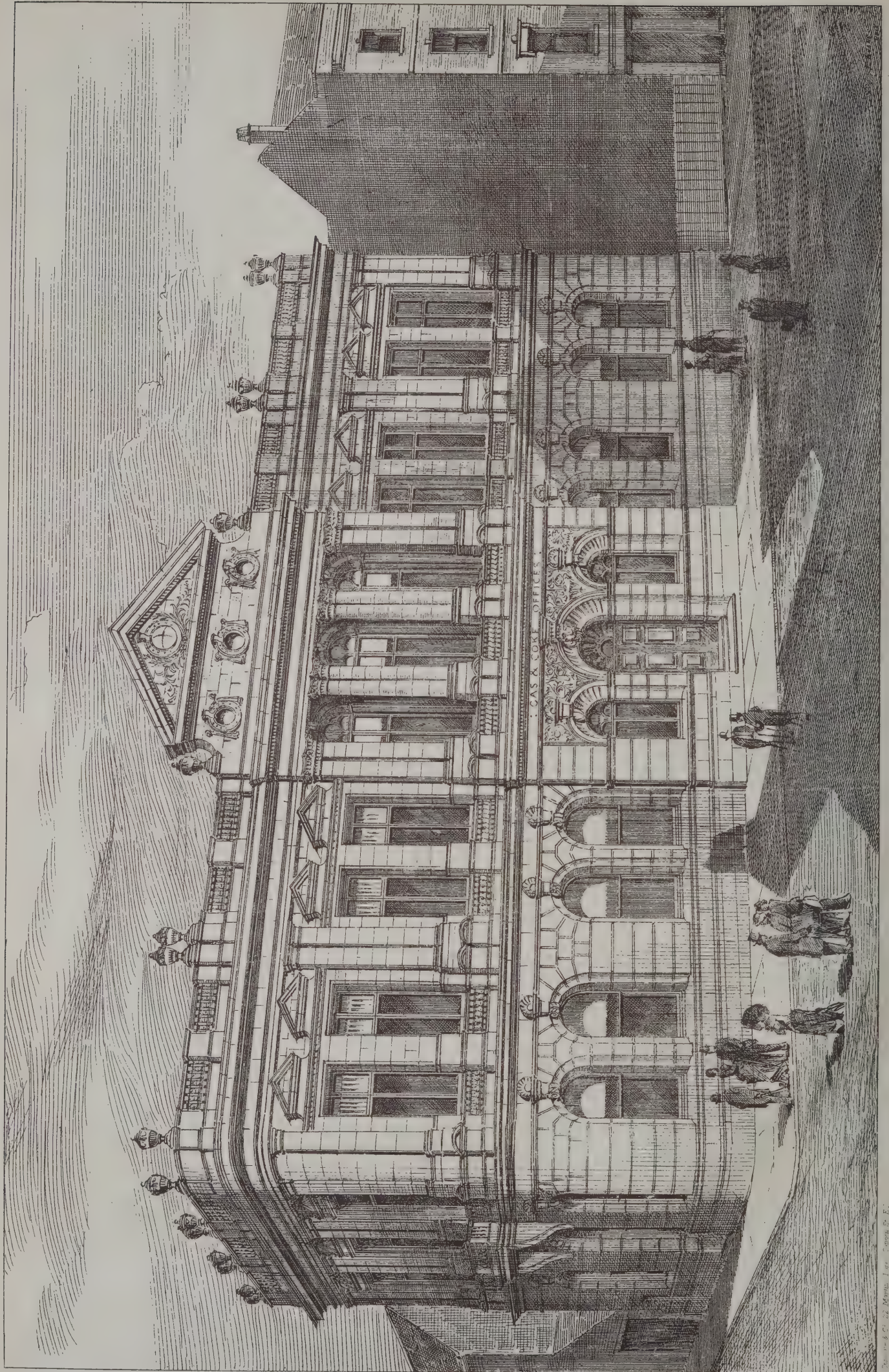
THE church of St. Lawrence, Appleby, contains an old tomb at the east end, which is known as the Countess of CUMBERLAND'S Tomb. It was erected at a time when great people cared less for public rights in a church than they do now, and it has stood in the way of all improvement of the building. Over twenty years ago, when the church was restored, Mr. CHRISTIAN wished to have the tomb removed, but the lord of the manor would not consent. It has been allowed to fall into ruin, although in 1656 the Countess-Dowager of PEMBROKE provided a fund for the conservation, and the fund is now supposed to produce about 80% a-year. Once again it is proposed to interfere with the tomb, and to remove it to the east end of the north chancel aisle. But some of the descendants of the Countess oppose the proposal, on the ground that by law there can be no removal without their consent. The case has been heard before the Chancellor of CARLISLE, and the decision has been postponed until February 20.

ACCORDING to the report of Captain SHAW there has been during 1883 an increase of 218 fires over the number for last year, and, compared with the average of the last ten years, the increase was 446. It will suggest the work of the Fire Brigade when it is stated that the journeys made in 1883 by the fire-engines of the fifty-five land stations have amounted to 29,850 miles, and the total distance run has been 67,850 miles. The quantity of water that was used was 29,000,000 gallons, or about 130,000 tons, nearly one-half of which was taken from the street pipes. Captain SHAW acknowledges that the work of the year was very severe, but his men have exerted themselves with zeal and goodwill.









GAS OFFICES, CHELTENHAM.  
JOHN G. DUNN, ARCHITECT.







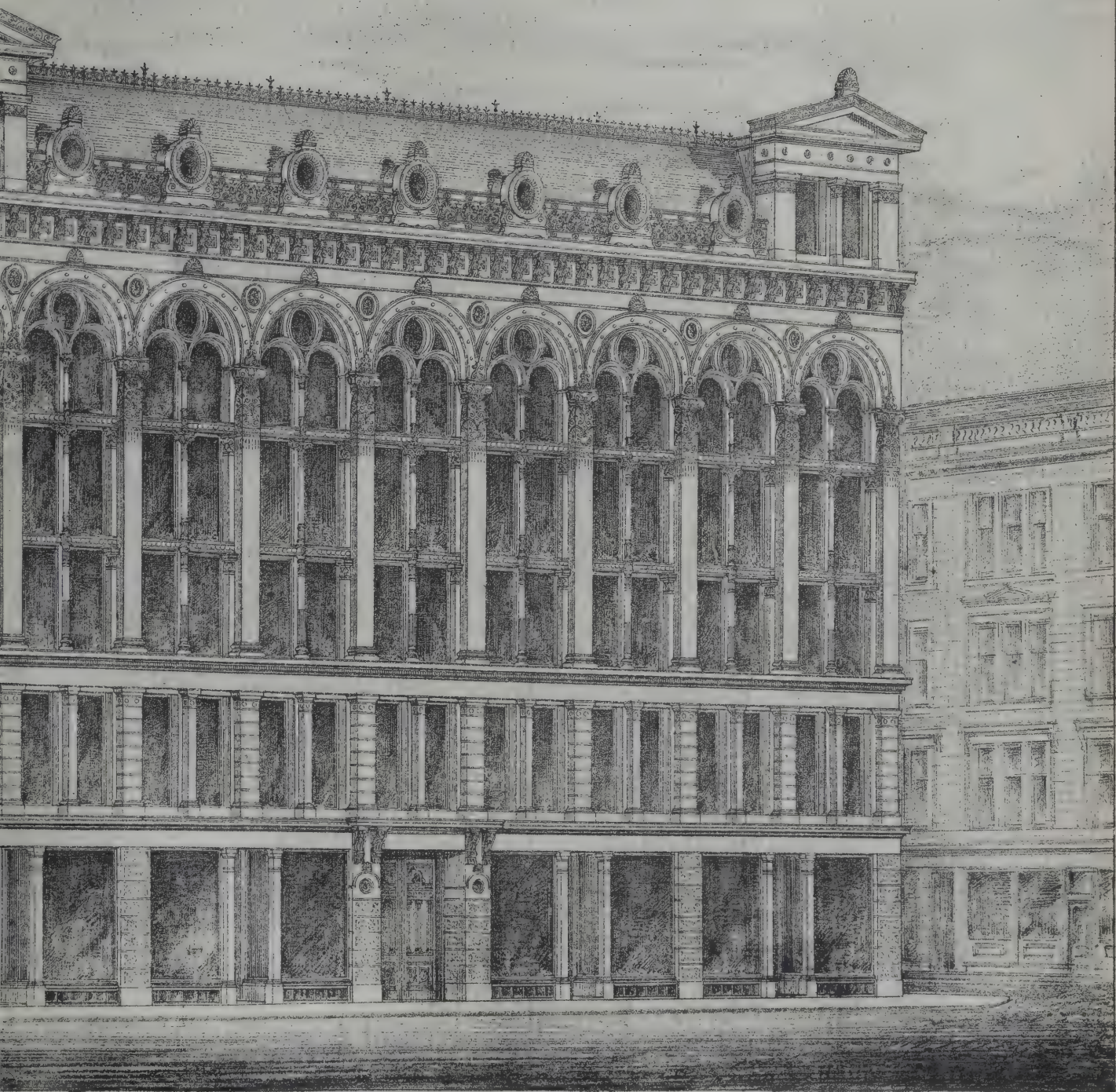


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DESIGN FOR WA

By ALEXA





HOUSE, GLASGOW.

SKIRVING





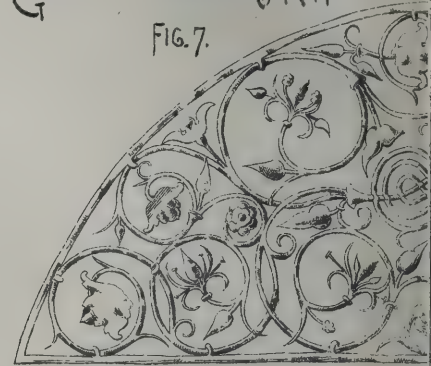






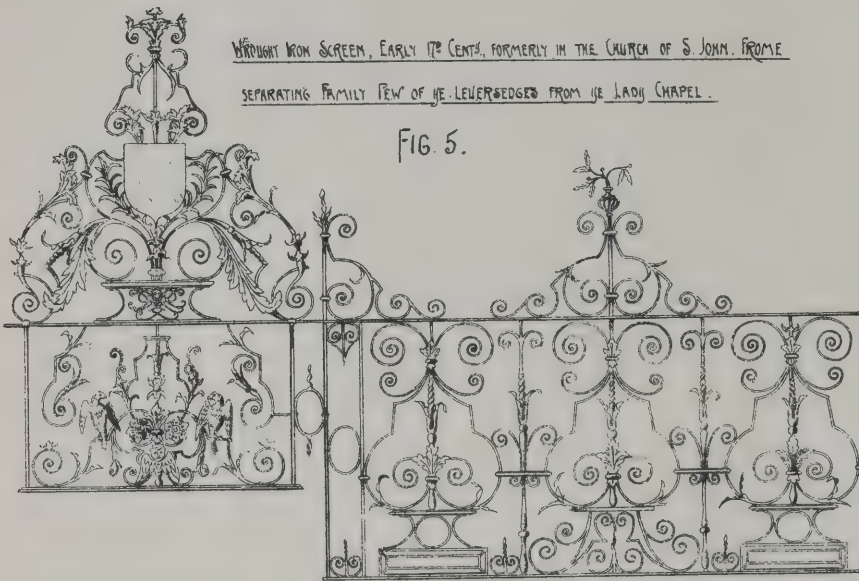
16<sup>TH</sup> CENTURY · WINDOW  
GERMAN · FROM THE S. K. MUSEUM ·

FIG. 7.



WROUGHT IRON SCREEN, EARLY 17<sup>TH</sup> CENTY, FORMERLY IN THE CHURCH OF S. JOHN, FROME.  
SEPARATING FAMILY FEW OF THE LEVERSEDGES FROM THE LADY CHAPEL.

FIG. 5.



PART OF IRONWORK ON SOUTH DOOR OF  
EATON · BRAY · CHVRCH

LATCH TO DOOR OF COTTAGE  
STANDFORD · VALE · BERKS.



FIG. 6.

S. ALBANS ABBEY CHURCH

FIG. 1.

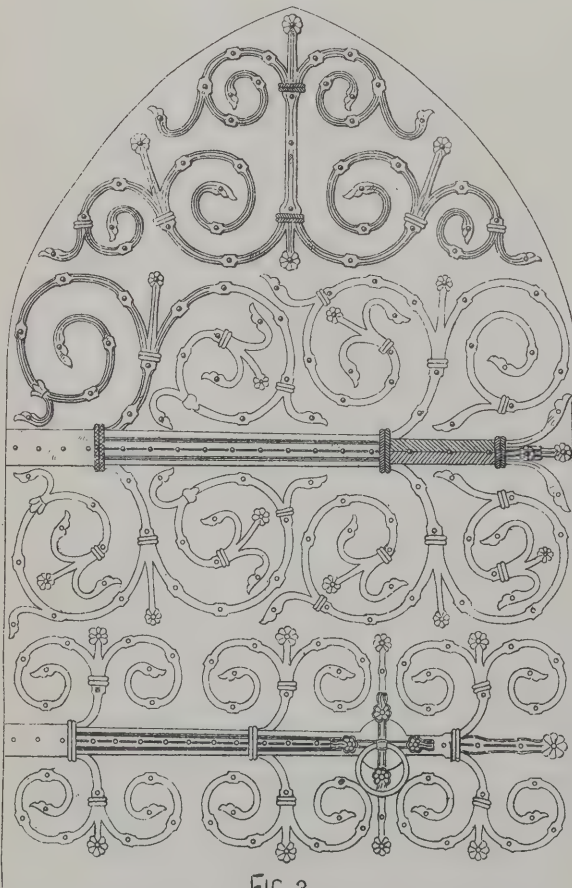
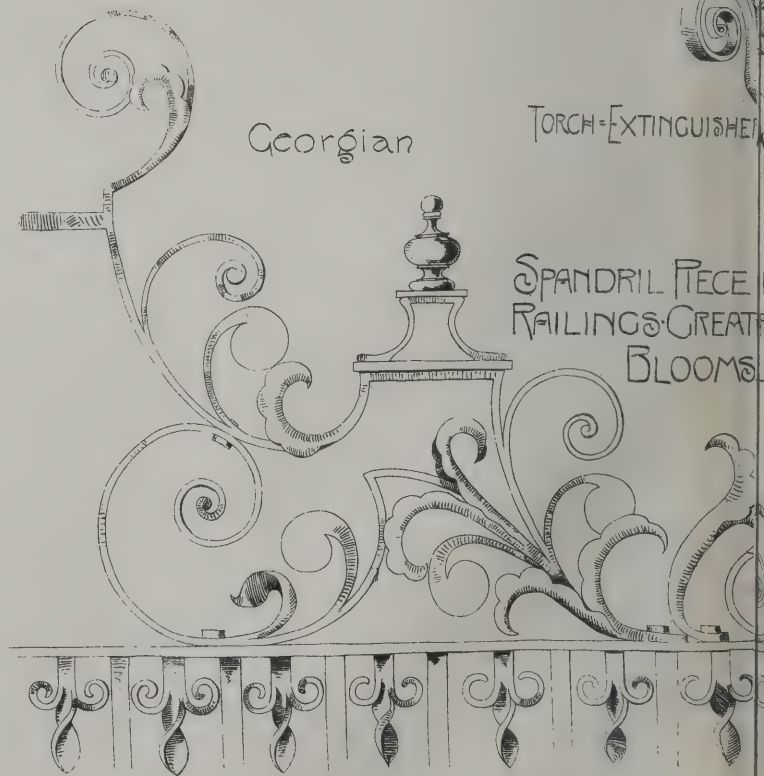


FIG. 3.

Georgian

TORCH · EXTINGUISHER



SPANDRIL · PIECE  
RAILINGS · GREAT  
BLOOMS

FIG. 10.

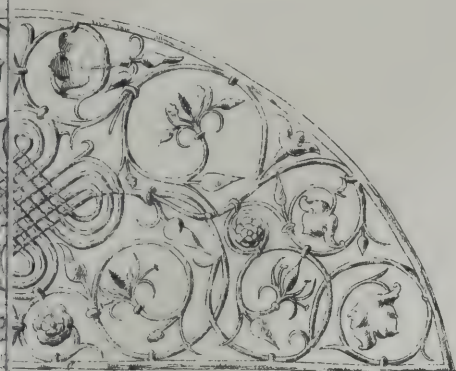
EXAMPLES OF W

Drawn by CHAF



Jan 26<sup>th</sup> 1884.

W. GRATING



S. ALBANS ABBEY CHURCH.  
FIG 2.

RAILING AROUND TOMB IN  
S. GILES CH. YARD READING.  
Date 1776.

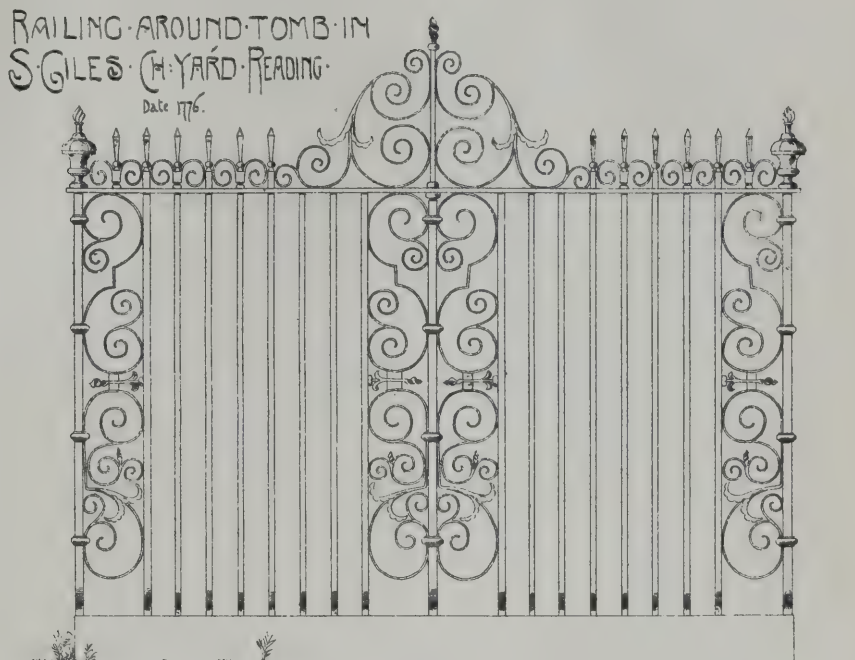


FIG. 8.

HOOR-GLASS BRACKET  
HURST CHURCH BERKS



FIG. 4.

GATE IN AREA RAILINGS  
GT. ORMOND ST. BLOOMSBURY

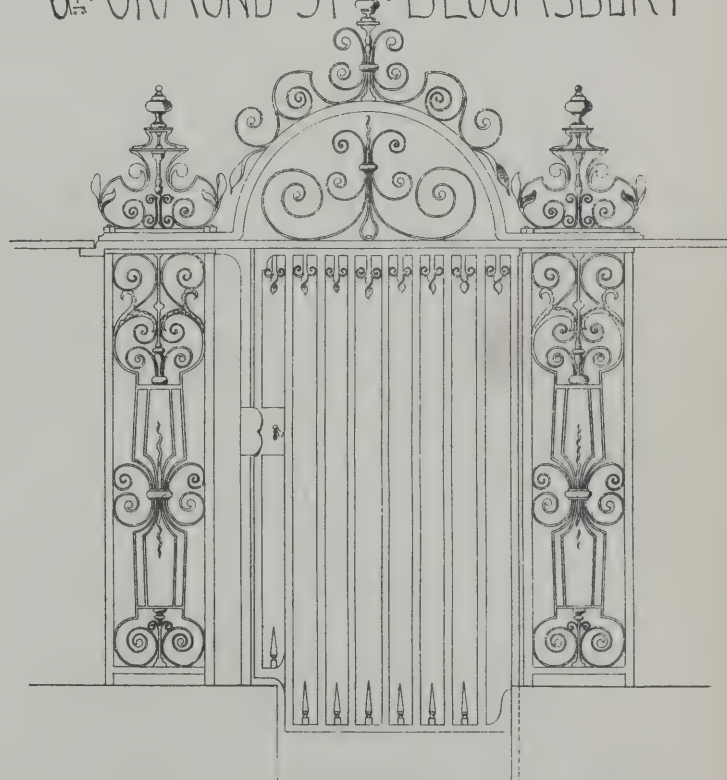


FIG. 9.

WROUGHT IRON WORK.

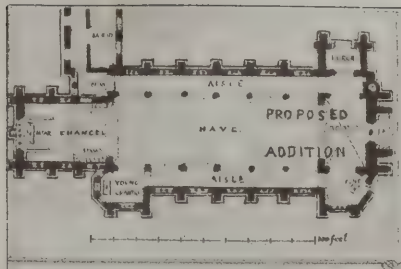
STEWART SMITH.







The Architect. Jan<sup>y</sup> 26<sup>th</sup> 1884.



"INK-PHOTO", SPRAGUE & CO, LONDON

ST. MANÉ'S BY THE SEA, HOLME HILL, GREAT GRIMSBY.

MESSRS M. E. HADFIELD & SON, ARCHITECTS.







## ILLUSTRATIONS.

ST. MARIE'S-ON-THE-SEA, HOLME HILL, GREAT GRIMSBY.

THIS church, the erection of which is owing to the munificence of Mr. T. A. YOUNG, K.S.G., Lord of the Manor of Kingerby, was commenced in the autumn of 1879, and solemnly opened by the Lord Bishop of NOTTINGHAM in August last. The western front and steeple with two bays of the nave are still incomplete, but it is hoped they may be erected at no distant period. The plan comprises a nave and aisles under one roof, 50 feet wide and 50 feet high to the top of the panelled ceiling, having high side-lights; the altar-platform raised nine steps above the nave, and the eastern window of five lights treated as a Jesse window, raised 25 feet above the nave level. This arrangement forms a portion of the design of the altar and reredos. The latter is of wood, entirely gilded like the old Spanish retables, and filled with an interesting series of paintings by Mr. WESTLAKE, and placed against the eastern wall, the altar and throne being well advanced forward. At the eastern termination of the north aisle is the founder's chantry chapel and vault, and the sacristy with organ tribune over and presbytery are to the south.

The building is constructed of fine red brick with a sparing use of Yorkshire stone, and the west front when completed will have a saddle-back tower and spire, covered with lead and Westmoreland slates, 200 feet high. The chancel is marked externally by a fleche of slate and lead-work rising 50 feet above the ridge, and contains a bell of a ton weight, supplied by TAYLOR, of Loughborough, with the old Lincolnshire legend, "Quod audisti in aure O Maria predicabo super tecta." Messrs. HADFIELD & SON, of Sheffield, are the architects, the contractors being Messrs. RIGGALL & HEWINS and Mr. J. G. SMITH, both of Great Grimsby. The church is warmed on HADEN's principle, and the chancel tile floors are by Mr. GODWIN, of Hereford.

CENTRAL OFFICES FOR THE CHELTENHAM GAS COMPANY.

THIS building is now in course of erection at the corner of North Street and Albion Street, Cheltenham, from designs selected in public competition. It comprises general office, managers and cashiers' offices, board and committee rooms, a large proprietors' room for the meetings of shareholders, and a cashier's residence. The front is faced with Corsham Down Bath stone, and Box ground stone weatherings. The principal rooms will be fitted with oak. The work is being carried out by Mr. THOMAS COLLINS, of Tewkesbury, under the superintendence of Mr. JOHN G. DUNN, A.R.I.B.A., of Birmingham, architect.

DESIGN FOR WAREHOUSE, GLASGOW.

THIS is a design, prepared by Mr. ALEXANDER SKIRVING, I.A., for an extensive furniture warehouse, and is a good example of a commercial building designed for utility, the chief object in which is to obtain the greatest amount of light combined with a pleasing architectural elevation. The style is refined, partaking somewhat of the Byzantine type, as shown in the arches and domical roofs at the corner. Although the horizontal lines predominate, the manner in which the pilasters are carried into the other flats gives variety and dignity to the edifice.

WROUGHT IRONWORK.

THE figures which appear in this illustration are referred to in the lecture by Mr. C. S. SMITH, A.R.I.B.A., published this week.

## THE NEW ART GALLERY, WOLVERHAMPTON.

THE new Art Gallery and Museum which have been presented to the town by an anonymous donor at a cost of over 5,000*l.*, and which have been erected in New Lichfield Street, on land given by the Corporation, are now nearly complete. The site is an excellent one, being in the centre of the town, and close to the fine collegiate church of St. Peter, which the gallery faces on one side. The buildings are of Classic design, executed in Bath stone. The frontage in Lichfield Street is 90 feet, and in St. Peter's Close 66 feet. There are two storeys, and the approach is by a flight of steps in Lichfield Street, beneath a portico, supported by six monolith red granite columns. There are also four detached similar columns above the portico, which are placed two on either

side of the folding glass doors which open out of the picture gallery on to a stone balcony. The façades are of two orders of architecture, the Doric being employed for the ground-floor storey, and the Ionic for the storey above. The ground-floor is to be devoted to the museum, which is lighted by large windows opening on to Lichfield Street and St. Peter's Close. The upper storey is to be devoted to the picture galleries, which will be lighted from the roof, and have a covered ceiling. The front of this storey and the side facing St. Peter's Church, instead of being pierced by windows has been filled in with handsome sculptured panels executed in Portland stone, with figures in bold relief, representing in Lichfield Street painting and sculpture, and in the Close science. These are the work of Mr. Boulton, of Cheltenham. At the terminals of the façades of the building deeply-recessed niches have been introduced, suitable for the reception of statues. Entering the building through a vestibule, and passing the cloak rooms, the large entrance hall is reached, on three sides of which are the rooms for the art museum—together 152 feet long. A fine stone staircase opens out of the hall and leads to the galleries, consisting of a suite of rooms, altogether 176 feet long. The rooms are so arranged that visitors can easily pass from one to the other. The building has been erected from designs and under the superintendence of Mr. Chatwin, architect, of Birmingham, and the builders are Messrs. Philip Horsman & Co., of Wolverhampton. Adjoining the Art Gallery, in the St. Peter's Close, there is to be erected a School of Art, at a cost also of 5,000*l.*, to supersede the present building in Darlington Street; 2,000*l.* have been raised by the sale of the present building, and almost the whole of the remaining 3,000*l.* has been subscribed. The school will correspond in outward design and character in every respect with the art gallery, and it will occupy the remaining portion of the total site of 1,500 square yards which was voted for the two buildings by the Corporation. It will have a frontage on St. Peter's Close of 87 feet, so that the total length of the façade on that side of the two buildings when completed will be 153 feet. The entrance will be in the Close, and the rooms on the second storey will be so arranged that on particular occasions they can be entered from the art gallery, and, with the rooms of the latter building, will form altogether a suite of rooms on that floor over 300 feet long. The work of demolishing the old buildings on the site and of getting out the foundations has been already begun. The art gallery will be opened in May in connection with the Industrial Exhibition. Mr. Chatwin is the architect, and Messrs. Horsman & Co. the builders.

## LYCIAN ART.

IN the third lecture of his University College course on "Monuments of Lycian Art," Professor Newton described the Ionic building at Xanthus, commonly known as the Nereid monument, the sculptural remains of which are in the Lycian Room at the British Museum. It was situated on a small eminence nearly half a mile to the east of the Acropolis at Xanthus. When first discovered by Sir C. Fellows nothing remained in position but the base on which the edifice stood. The architectural members and sculptural decorations were found lying strewn about on the ground below the base, having probably been thrown down by an earthquake. The study of these remains, after they had been sent to England, enabled Sir C. Fellows to reconstruct the edifice, and the result of this reconstruction may be seen in a model which he presented to the British Museum, and which stands in the Lycian Room. The edifice, which was built of white marble, consisted of a lofty pedestal or base, surmounted by a temple-like structure, supported by Ionic columns and richly adorned with sculptures, some in relief and others in the round. Within the colonnade was the cella, round the outer walls of which ran a narrow frieze. Above the colonnade was another frieze, which seems to have served also as an architrave, as no remains of that member were found. On the base were two other friezes, one immediately below the cornice which crowned it, the other on a larger scale below. The position of the columns was determined by sinkings in the stylobate at regular intervals; intervening sinkings marked the position of statues placed between the columns, of which the arrangement was what Greek architects called *araistyle*—that is to say, with very wide intervals. The statues all represented Nereids in rapid motion, each with some marine creature at her feet as an emblem. Of the two friezes round the base, the larger one represented a battle scene, apparently between Greeks and Asiatics, mounted or on foot; on the smaller frieze was the siege and capture of a city told in successive scenes. On the frieze above the columns the subjects were a hunting scene; a battle between warriors, some mounted, some on foot; a procession of figures bringing presents, intermixed with groups of figures conversing. On the frieze round the cella were a sacrifice and a banquet. In one of the two pediments they had a battle between horse and foot; in the other, a composition in which there were in the centre two seated figures, and at the sides smaller figures. On the apex of either pediment, Professor Newton thought there might have been a group of two figures in the round, not at the two corners where Fellows placed them. If they



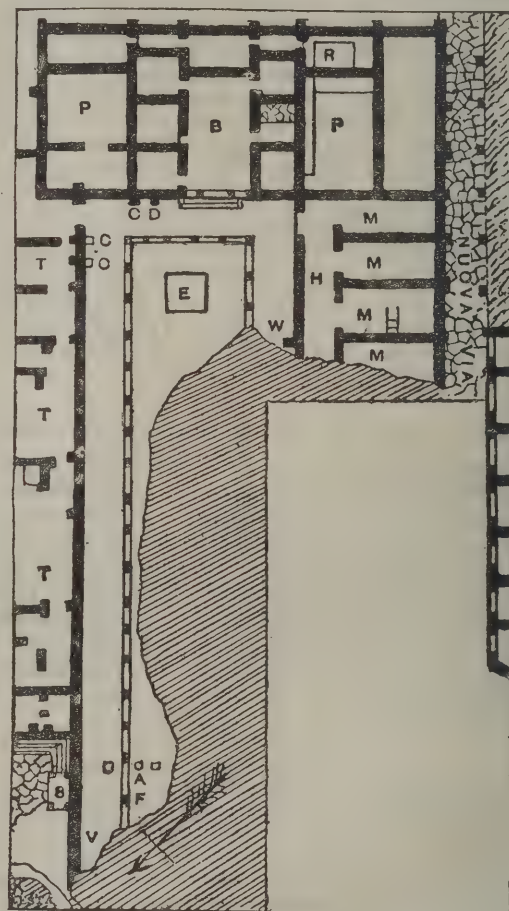
considered the sculptural decorations as a whole they might assume that the edifice which they adorned was not a trophy, as Sir C. Fellows had designated it, but a sepulchral monument, such as the Greeks called heroon. Taking this for granted, they might further assume that the sculptures had reference to one personage, to his warlike exploits and other doings in life, and probably to the worship accorded to him after death. The greater part of these sculptures might be regarded as historical rather than mythical, realistic rather than ideal. Realism was strikingly shown in the siege of the city on one of the friezes of the base. If they adopted the arrangements proposed by Michaelis in his excellent memoir in the *Annali of the Roman Archaeological Institute* for 1875, the first scene was a battle in the plain outside the walls; then came an attack on a gate, against which the besiegers were placing a scaling ladder. Next was the blockade of the city, which seemed about to terminate in a capitulation, indicated by a group outside one of the gates. The last scene represented the capture of the city. A long line of walls, probably of the Acropolis, nearly denuded of defenders, showed that the city had surrendered. On the following scene a noted personage, whose parasol denoted his superior rank, was receiving the submission of the vanquished. If they turned to the statues in the round they found that the movements of the Nereids between the columns were marked by extreme agitation, as if they were perturbed by some great event. The general action of these figures was very spirited, but the modelling of the figures and the composition of the drapery were very unequal. The same observation applied to the friezes, of which the composition was throughout far superior to the execution. The study of the style of these sculptures brought them to the question of their date. Some archaeologists had placed them in the latter half of the fifth century B.C., others early in the fourth. The siege represented on the frieze had been thought to commemorate the capture of Telmessus (Makri) by Pericles, King of the Lycians, which was recorded in a fragment of the historian Theopompus. If they might venture to identify this Pericles with the Pericles whose name they found on Lycian coins, not earlier than B.C. 360, they then obtained a date for the capture of Telmessus, and if that was the event represented on the heroon, the Nereids must be taken as a figurative representation of the Gulf of Glaucus, now the Bay of Makri, on which Telmessus was situated. This conjectural interpretation of the Nereids the lecturer deemed not unworthy of consideration.

### THE HOUSE OF THE VESTALS, ROME.

THE correspondent of the *Times* in Rome has prepared a plan showing the arrangement of the House of the Vestals in the Forum, and the position in which some of the antiquities stood when revealed. The three inscribed pedestals of statues of the Vestals, discovered on November 5 last, stand at A. From them the portico of the atrium extends, as will be seen, direct to the tablinum B and its contiguous chambers, turns there at right angles and at equal distance in front of them, and returns along the other side. This portico was formed in front of the tablinum by six columns, counting the corner ones, and along each side by more than nineteen, the number of foundation-stones (cushions) thus far discovered *in situ* on the north-east side; and, from the remains of a slender shaft of richly-veined breccia corallina marble found within the area and corresponding in proportion to the basements, it may be conjectured that the columns were of that beautiful material. The pedestals of the columns were connected by a low wall balustrade of about 2 feet in height, faced with marble. The pavement of the portico was formed of slabs of richly-coloured marbles, of which the portion in front of the tablinum is almost intact; the wall of enclosure was panelled with marble throughout, and against it were placed the statues of the Vestales Maximæ on the pedestals which have now been found and on many others, of which fourteen were discovered here in the fifteenth and sixteenth centuries. That these statues stood along the walls is proved by the discovery of the basement stones of some of their pedestals at C, C, C. The fourth pedestal discovered in the course of the present excavations was found at D, and still stands leaning against the front wall of the tablinum, more or less in the position it occupied, but it had been moved from its place. A fifth pedestal has quite recently been discovered standing against the south-west wall of the portico of the atrium at W. The central area of the atrium is paved with black mosaic. At the upper end of this area at the distance of seven metres and a half from the steps leading into the tablinum, there is a cavity about four metres square and a metre in depth, lined with slabs of coloured marble at the bottom and on the sides, and bordered by a wall of about a foot in height, coated externally with marble. Only one corner of the interior of this cavity has yet been cleared of the *débris* within it. The mosaic pavement of the area between this curious cavity and the line of the columns of the portico in front of the tablinum is different from the rest, and apparently formed of white tesserae only. This sumptuous portico—a cloister of ancient days, along which it requires but little imagination to picture the Vestals

themselves, those who had passed their twentieth year of service teaching the rites to those who had not reached their tenth, and those between their tenth and twentieth passing to and fro, attentive to their sacred duties—gave direct communication between the House and the Temple; for while writing this another basement stone of a column has been found in its place at F, on the further side, from the House, of the three pedestals at A, and, as the plan will show, it is evident that the portico continued on to the Temple, of which the wreck of the podium is marked at K, the full length of the portico being no less than 71 metres.

The walls of the tablinum B, which measures 12.65 metres by 8.50, were panelled with different sorts of richly-coloured marble, with mouldings of rosso antico, and its flooring was laid with materials of the same kind arranged in geometric designs. Considerable remains of the marble pavement and of the lower part of the wall decoration have been found *in situ*. From the tablinum there open three rooms on each side, each measuring about four metres by four and a half. The vaulted ceilings of these rooms are entire, but all traces of their decorations have disappeared. Below the flooring of the middle room on the right a number of large, round amphoræ were found, cut in two horizontally and placed with their mouths and bottoms upwards, evidently for the



purpose of preventing damp—to which the House must have been much subject, for its south-west wall is built against the side of the Palatine, and along the line of the Nova Via, the pavement of which is 12 metres higher than the level of the atrium and the ground floor of the House. On one side of the tablinum and the rooms connected with it are two large chambers, and on the other one, each of them corresponding with it in length but somewhat narrower. Behind these chambers there extends a series of narrow rooms forming an irregular corridor, but this posterior portion of the building has not been sufficiently cleared to show how it was communicated with from the rest of the House. The vaultings of these narrow rooms, or this corridor, are intact, and above them the mosaic pavements of the upper storey. Beyond the wall of the south-west side of the atrium there runs a kind of passage or corridor, H, of rather more than 3 metres in width, from which a series of long rooms, M, M, M, open. In this corridor there are a few traces of encaustic painting. At O there is a staircase leading up to the first floor, which is intact everywhere excepting over the tablinum and the two of the chambers on each side of it, marked P, and over the corridor H. On this upper floor there are considerable remains of the Vestals' bath-rooms; some, as at R, lined with marble for washing, and others with suspended floors and walls surrounded with *caloriferes* for the hot-air bath. The south-west half of the atrium and its portico on that side have still to be cleared, and the continuation of the excavations will show how far the south-west wing of the House reaches beyond the rooms marked M.



The first of the Vestal Virgins named by Numa—Gegania, Verenia, Canuleia, and Tarpeia—resided in apartments assigned to them in the Regia. Their number, originally four, was increased to six by Tarquinius Priscus and later on, according to some authorities, to as many as twenty. When Augustus removed the residence of the Pontifex Maximus to his new Domus on the Palatine, he gave the Regia to the Vestals. That building, of which considerable traces were found in the excavations in 1879 and 1882, was destroyed in the great Neronian conflagration, and immediately afterwards rebuilt, but not exactly on the same spot. The new arrangements of the streets necessitated a slight change to the south-west in the position of the Vestals' atrium and House. In the time of Commodus the Temple and the House were again destroyed by fire, 191 A.D., at the same time when the Temple of Peace and many of the finest edifices of the city were burnt. The flames spread with such rapidity that the Vestals, in order to save the Palladium, were compelled to carry it openly across the Sacra Via, when Herodian narrates it was seen openly for the first time after it was brought to Italy from Troy. The remains, therefore, now being disinterred are those of the House and atrium as rebuilt, or, at any rate, as restored, after the fire in 191 A.D., by Septimius Severus, but, in the course of the works, still incomplete, just between the three pedestals at A, and the remains of the podium of the Temple of Vesta, K, a mosaic pavement—perfect as far as it has been uncovered—of the Republican period, and corresponding exactly to some of the pavements of the Regia, has been found at R, at the depth of about a mètre below the level of the portico of the atrium now discovered, and it is probable that this may prove to be part of the pavement of the earlier atrium destroyed in the conflagration A.D. 65.

### CARVED WOODWORK.\*

ONE of the most difficult things to do at present is apparently to be impartial in dealing with work belonging to any time between the sixteenth and nineteenth centuries. It was far from being the most memorable period of art, but just now there is a tendency to exalt its productions to a level with what was done long ago in Greece or Italy. For some men

There is a consecrating power in Time,  
And what is grey with years to them is godlike,

and of this disposition of mind Mr. Saunders' book is a proof. One of the illustrations in it suggests that he himself could design woodwork in a better style than the old examples he selects, and, among his long list of subscribers, we find names of men who, if they tried, could not produce things so bad as some of the furniture in the book. But whatever may be the origin of this sentimental regard for carved oak woodwork of the sixteenth and seventeenth centuries, there are plenty of people who are willing to pay a high price for examples and for drawings of examples. It is a pity to see such good drawing, good paper, and good binding as we have in this volume expended on a subject like that selected by Mr. Saunders. The objects which are drawn are no doubt mainly the work of English hands, and if they were published with a view of indicating the condition of art in this country at one time, we could no more cavil at their appearance than at the specimens of bad spelling and bad grammar which are occasionally given by historians to suggest the state of education at a certain period. But Mr. Saunders claims artistic as well as historic interest for his specimens of the handiwork of village Quinces and Snugs. Mr. Ruskin examined the original drawings; and although he is easily pleased with anything that does not belong to our mechanical age, yet he was compelled to say that the examples were "not in harmony with the precepts of the best masters in wood-carving." It would be probably nearer the truth to say that fourth-rate masters would disown such work. Mr. Saunders is, however, enthralled by the style, and would have us believe in the "earnest spirit and simplicity of aim shown in the execution of the work of that period," the "integrity of purpose," the "simple and effective ornamentation," and other virtues. But, while admitting that there was no stint of materials in those days, and that the work is constructed so as to endure, we do not believe that it has any claim to be considered artistic. The substantial character of old English work is so generally acknowledged, there is no need to undervalue modern work in order that seventeenth-century carpenters may be exalted. When Mr. Saunders says that genuine and simple principles of good workmanship appear to be now "too much ignored or wholly lost sight of," he is unjust towards his contemporaries. There would be no difficulty in finding in London, or in any of the large provincial towns, specimens of the carpenter's and cabinet-maker's skill that bids fair to last for centuries. It is true that work is turned out which is the reverse; but the sixteenth and seven-

teenth centuries also recognised the fact that some people are more likely to be attracted by what is showy and cheap, and provision must be made accordingly. It is only the best specimens of the work that have survived. Even Mr. Saunders is forced to admit that Time has not been conquered without the expenditure of an enormous mass of material. Speaking of houses, he says:—"The timbers were often of extraordinary and apparently unnecessary length. This was, no doubt, partly owing to the ease with which large pieces of timber could then be obtained, and partly to the fact that it was cheaper to use it in larger sizes than to cut it into smaller ones." We cannot bring back those happy days when oak trees were inviting passers by to come and cut them down, and we have therefore to be thrifty in the use of timber. We may not be able to have unwieldy pillars to support a slight weight, or dining-tables that seem better fitted by their size and structure for the operations of an abattoir, or chairs that would sustain a performing elephant (and to lovers of the grand old English furniture nothing atones for absence of quantity); but in spite of circumstances it is still possible to get furniture which we may use for sitting, dining, and sleeping without any risk of accident. There may be some security in the big chests which Mr. Saunders represents, yet after all a bank is a safer place to keep money, and for a tired man of business an iron bedstead is more comfortable and healthier than the "sixteen post" oak bedsteads at Bladon Castle and Buxton, which seem admirably adapted for the creation of nightmares.

The simple, effective ornamentation which Mr. Saunders admires is a very mechanical affair. The first and last principle appears to have been that a surface to be ornamented must be entirely covered, no matter how often a form was repeated. Everything was to be uniformly stiff, whether it was a copy of an Ionic volute, a leaf, a flower, the human figure, or an angel. There is not a line among all the plates in the book which suggests that the old oak carvers had any more knowledge of what grows in fields and gardens than the men about Shoreditch who now produce, by the thousand, without any variation of form, the floriated brackets which are stuck on cheap furniture. How an Indian carver, who toils for a penny a day, would be amazed if he saw those forms and heard of the idolatry which surrounds them!

### LEICESTER SOCIETY OF ARCHITECTS.

THE eleventh annual meeting of this society was held on January 22, when the following officers were elected for the year 1884:—President, Mr. W. Jackson; honorary secretary, Mr. A. H. Paget; council, Mr. R. J. Goodacre, Mr. Joseph Goddard, Mr. W. Millican, Mr. J. B. Everard.

In the course of his address the President made the following remarks with reference to a recently advertised competition:—There is one subject which is probably uppermost in your minds, and which will not come before you in the report. The report deals, of course, with events and proceedings of the past year, and the question of architectural competitions has but recently been forced upon your notice. Upon it I must be allowed to make a few remarks. Some years ago it was generally believed that if a man, or a society of men, wanted to get the most work out of an architect for the least money, the most effectual way was to go in for an open competition. It was believed that all that was requisite was to draw up a set of absurd conditions, and advertise them with a bait of twenty or thirty pounds, in order to catch any number of architects as in a net—a net spread in the sight of all men. Experience soon proved, moreover, the inutility of such proceedings, not only from the point of view of the architects, but from that of the employers themselves. Open competition was found very often to degenerate into a scramble, and to develop work which was showy and superficial rather than good; and, as a matter of fact, open competition, except in special cases and under well-ordered conditions, has already ceased to be the rule. But the old ideas still linger—as old ideas are apt to do, from ignorance or prejudice—in certain places; and thus, from time to time, we are surprised by a publicly-advertised competition which revives the worst traditions of the past. The principle laid down by the Institute is perfectly clear. The actual and final competition should be limited, and each competitor should be paid for his work; the drawings should not be more in number, or to a larger scale, than is necessary to explain clearly the design; there should be no playing fast and loose with the author of the premiated design; and there should be a properly-qualified judge.

Now, with respect to a competition recently advertised by the Town Council of Leicester, and which your council does not consider satisfactory, you will observe that the above conditions, which have been drawn up and sanctioned by the Institute after a long and careful study of the subject, are not complied with; on the contrary, the selection of designs is entrusted to a sub-committee, who will report to the Estate Committee who, assisted if they see fit by a professional architect, will make selection of two designs for the Town Council, who will make the final de-

\* *Examples of Carved Oak Woodwork in the House and Furniture of the Sixteenth and Seventeenth Centuries.* By William Bliss Saunders, Architect. Bernard Quaritch.



cision, who will also reserve themselves full liberty of action with respect to all proceedings in connection with the proposed buildings, and are not bound by anything done under or in connection with the competition, except the payment of premiums. Some troublesome rights of light are involved with which intending competitors are instructed not to interfere, or render the Corporation liable for damage. Each design is to be drawn to a large scale, 6 feet to an inch, the sizes and heights to be marked in figures, and is to consist of a plan of each floor with sections, together with three elevations and a perspective view, accompanied by a written description, setting forth in detail the character of the material and workmanship, and an approximate estimate of the cost. The first premium of 25% is to merge in the commission, if the author of the premiated design is employed to carry out the work, and in that case the commission is to be considered as payment for all matters or things arising out of or connected with the erection and completion of the buildings. The premiated designs are to become the property of the Corporation, and the whole of the subsequent contract drawings and specifications are to be given into the possession and to become the property of the Corporation, who reserve the right to reject the whole or any of the designs if they should appear unsuitable or of too expensive a character.

### THE DECLINE OF ENGRAVING.

A LETTER has been addressed by the Fine Art Society to the *Times* in regard to the statement that fine engraving, whether in mezzotint or in line, is doomed. They say:—A principal cause for the decay of engraving lies in the miserable condition of the law of copyright, and the apathy of the Legislature, the artists, and the engravers, and the connivance of the public at the continual breaches of it, the consequence of which is that the whole land is now overrun with traders of the lowest class engaged in selling photographs of popular copyrights. No engraving of any interest has been published of late years, but it has at once been pirated with impunity. We say with "impunity," for the headquarters of the pirates are situated in the Channel Isles, where they cannot be touched; their goods are transmitted to England through the post, but the Post Office authorities (although the importation is prohibited by Act of Parliament) refuse to detain them; they are received by Jews living in the purlieus of Houndsditch, whose abode is well known, whence they are sent broadcast, by means of travellers, over the length and breadth of the land. But there is no power of search, no power to seize, even if the offenders are caught *flagrante delicto*, the only remedy being by summons to be served at and to be heard "in the district where the offending party resides." It is needless to say that these *chevaliers d'industrie* have no fixed place of abode. This evil is increasing at an enormous rate, and the publishers, while unable to check it, are suffering such losses therefrom that they hesitate to give large commissions to engravers, and naturally prefer processes which involve but little outlay. As an instance, during the past four years we have published six engravings, for the copyrights in which we paid over 7,000*l.*, and for the engraving over 10,000*l.* Within a month of their respective issue, photographs of them were hawked about at half a crown each.

The trade of these pirates would never have attained to the volume we have mentioned had they not received substantial support from the public. To the credit of the smaller dealers in works of art be it said, they have almost unanimously refused to countenance this robbery. But the public, who, by the way, have lately expended much righteous indignation upon the literary piracies of our Transatlantic brethren, see no harm in aiding what they know to be a wrong and a fraud.

The apathy of the artistic body as regards piracy is extraordinary. They have hardly stirred a finger to defend their rights, and consequently will, probably, in the near future, suffer grievously for their omission. It would be perfectly easy for any one so disposed to photograph unperceived every picture of note in the Academy Exhibition, and flood the market with copies within a fortnight of its opening. If such were done the value of artistic copyrights would tumble from hundreds to tens of pounds in a day.

Another cause for the decay of engraving is the length of time which places take to produce. As regards this, the engravers themselves are in a measure to blame. Work does not, perhaps, come so readily to many of them that they can refuse to accept a proffered commission; but the result is that months and years drag on without a plate being completed, until the interest therein is gone, and publishers are perforce driven to adopt in future speedier methods of reproduction.

There is yet one more reason for the decay of the art, and that is the gaps which are being year by year made in the ranks of the profession without any fresh men coming in to fill them up. Since the retirement of Mr. Cousins and the death of Mr. Holl, the number of able engravers may be counted on the fingers of one hand. There is undoubtedly at present no better opening for a young student of talent, mind, who will be content with an uneventful life, a fair income, and an almost certain place among the

Academic body, than that of one who takes up engraving, whether line, mezzotint, or mixed. We do not believe that reproductive processes will be the final nail in the coffin of engraving, and we speak as the publishers of Sir F. Leighton's *Wedded*, the most successful reproduction yet issued. With the law of copyright amended, we are certain that for another generation, at least, there will be room for a larger number of able engravers than have formed the school at any time during this century. Mechanical work at present shows no sign of competing successfully with manual work accomplished by a real artist.

### STUDIES IN ARCHITECTURAL STYLE.\*

IN this volume Mr. Pullan has brought together a large number of the designs prepared by him during a period of forty years. The variety suggests not only the range of the author's studies and capacity to treat several styles, but also the transformations of architectural taste. We have designs which belong to a time when England was supposed to be enthusiastic about Mediæval forms, and everyone was expected to cry out with Jonathan Oldbuck, "Gothic! Gothic! I'll go to the death upon it." There was to be one universal language in art, and all things were to be expressed in it and in it alone. The spirit of that time is to be seen in Mr. Pullan's design for the decoration of the Queen's Robing-room in the Houses of Parliament, which is one of his earliest works. Here we have the pedigree of the House of Hanover traced back to William the Conqueror, and displayed in the true Perpendicular style. But it was also proposed to depict "the most important events of each dynasty" in the same style, and thus the *Landing at Hastings* and the *Passing of the Reform Act* would, we suppose, from their uniformity of treatment, present the appearance of events that occurred within one period. It was like a return to the system of æsthetics which prevailed before Benjamin West painted the *Death of General Wolfe*, and when the laws of taste enjoined that in a historical picture, no matter whence the subject was derived, all the figures should be clad in Roman robes.

It was soon found that the world would not put up with one style, and Mr. Pullan, like many another modern Goth, was compelled to recognise the fact that there were good buildings before the rise of Mediævalism, and that when it declined the art of architecture contrived to survive. Accordingly we perceive that since 1857 Mr. Pullan has sought public favour with designs in the Italian Renaissance, French Renaissance, English Renaissance, Italian, Palladian, and Neo-Greek, as well as with the more ancient Romanesque, Byzantine, and Lombardic styles. Could there be a better comment on the restlessness and eclecticism of the age?

It is a hazardous undertaking for one man to attempt so much. But it should not be forgotten that Mr. Pullan has had better opportunities than any architect of our time to study all those types of building *in situ*. His knowledge has been gained, not by occasional and hurried scampers through a few foreign cities, but by long years of residence abroad. If there is any advantage in travel it should surely be seen in Mr. Pullan's designs.

It is very difficult to assess the value of the studies. However opinion may be divided about the merit of the designs, every one would agree that justice has not been done to them by the original draughtsmanship or by the reproductions. We do not remember a case which is a stronger testimony to the advantage of experts in drawing. If Mr. Pullan had obtained the services of some one to prepare his designs for publication, they would be more assured of success. One or two examples will prove this. There is a plate of thirteenth-century churches, which, as the author says, "shows the various forms which were most common at that period." If a good draughtsman copied this plate on a large scale it would, with little or no alteration, make a picture that would be more effective than anything of the kind by Augustus Pugin, and it might form a companion to the corresponding drawing of Cockerell, illustrative of Classic art. But in Mr. Pullan's there is very little effect. How much the designs can gain or lose by the style of drawing will be also seen from a comparison between Mr. Pullan's design for the decoration of a chancel arch of a Renaissance church, and his design for a portion of the dome of St. Paul's. Of the two, the former is superior on the whole, but it is marred by the execution. Mr. Pullan once brought out a small pamphlet *apropos* of ritualistic difficulties concerning altars in church. It contained several sketches of different types of altars, which have been reproduced among the "Studies," but in their present form they are little more than mere blots. Mr. Pullan, in becoming his own draughtsman, has been acting an unfriendly part towards himself. We need not say more on the subject.

The "Studies" are in truth valuable, and it is possible to utilise them with more advantage than the owner has done. Mr. Pullan's acquaintance with the best models has given a peculiar refinement to all his designs; and we fear that his want of success

\* *Studies in Architectural Style.* By R. J. Pullan, F.R.I.B.A. Published at 15 Buckingham Street, Strand.



has been often due to this quality. The quietness of his designs would be "nowhere" in a competition against works in which effect took the place of the Demosthenian action, and was the first, the second, and third consideration. Bentham somewhere refers to the case of Serjeant Maynard who, although a jurist in whose works a treasury of law is to be found, was never able to grasp a brief. The designs of Mr. Pullan are in their way like Maynard's treatises. They may not have gained success in the usual sense of the word, and occasionally might be more aptly expressed, but the wise student will find no difficulty in turning them to account.

### WROUGHT IRONWORK.\*

IT is not my intention to-night to deal with the earlier history and production of wrought iron; this has already been done by very able hands, and its study is purely archæological. I wish to take up the subject from about the eleventh or twelfth centuries, and, by means of a number of notes and sketches made at various times when studying in London at the South Kensington Museum and elsewhere, to draw your attention to some of the characteristic features of the various periods which follow. I do not claim for my paper any originality of treatment. My excuse for choosing it is that it has not before been dealt with in our society, and that it is one to which I have given many hours of enjoyable study in sketching rambles in London and the country.

Few specimens of ancient art can be more attractive to the architect or archæologist than those wrought in iron. How greatly is beauty enhanced when utility and simplicity are her companions, and in the few specimens of metal-work which we to-night shall study as examples of the great family to which they belong I hope we may find these three virtues hand in hand. Take, for example, the hinge to the south door of Eaton Bray Church. What can be more beautiful than its graceful curves, its cleverly-wrought ends and enriched surfaces? Its use and purpose are self-evident; not only does it carry the door entrusted to its unerring guidance, but it braces and strengthens all its parts. The material, rude and uninteresting to some though it be, clearly tells by every form and curve the story of the many processes by which it has been wrought; and the very fact that wrought iron carries its history with it seems to me one of its greatest charms.

When we look at the work of the smith long since gone to his rest, we seem to see the man at his forge; and as we look and admire his skill, a fraternal feeling grows in our mind, and we rejoice that, although we pass into the unseen, those of our works which are useful, pure, and beautiful may live after us and be appreciated by those who follow. Can we be surprised that he who wrought the subjects of our study to-night inspired the poet Longfellow with those charming verses which will live as long as England is a nation?

So much for the abstract. Let us get to work. We will look first at the earlier specimens of English wrought iron. These must naturally be taken from our churches—the monumental histories of our nation.

Ironwork has suffered less than many other materials at the hands of enthusiastic religionists, who in the heat of their fanaticism robbed the Church of many of her choicest art treasures. But in the case of iron the metal itself was no great booty, and its office was one of practical service; the spoiler has therefore generally let it rest. Want of proper attention and repair, and the ravages of time have been the principal enemies of our ancient ironwork, and in spite of these, enough remains to show that, in its treatment, difficult as it was to work, the same care and artistic skill were used which characterised the other materials which compose our sacred edifices.

Among the existing examples of wrought ironwork, the hinges on which the doors were hung form the earliest specimens. These owe their origin to Norman architects, and are comparatively rare. At this period they have not generally much scroll work attached to them, and the turns are often very stiff, the principal branches at the head of the hinge representing the letter C. An example of this class of hinge, probably a copy of an old specimen, is the hinge on the doors of our Reading Abbey gateway, restored some years ago by Sir Gilbert Scott. There are also in St. Albans Abbey Church some hinges of this period. The example in fig. 1 has the strap continued right through, and has an ornamental termination, a portion of which only now remains. In the second example, fig. 2, the strap terminates with the commencement of the scroll. The knob at the welding point is fashioned into the head of a serpent; this device, with jaws extended, also occurs at the ends of some of the scrolls, and is in high relief, and is exceedingly well executed. In both these examples the surface is enriched with a kind of chevron, easily produced with the chisel; the thickness of the metal is three-eighths of an inch at the commencement, and is gradually brought down to one-eighth at the terminations.

Another very perfect specimen of Norman work is at Sempring-

ham Church in Lincolnshire. Here, in addition to the hinges, the door has an ornamental iron edging, or border of characteristic design. This border was continued in the Early English work, but was reduced in bulk, and became much more simple. We get an example of this from St. Mary's, Norwich, where we see it in the form of a simple band, nailed at intervals around the edge of the door.

It is interesting to notice the care with which the smallest details were executed; the nail heads even had a characteristic form, of which I have sketched one or two examples.

Although the Early English work was finer in detail, and possesses a better finish, it has not the originality and freedom which the original Norman work possessed. Another very fine specimen of work of this period is on the south door of Eaton Bray Church before referred to (fig. 3). The ironwork here consists of three principal hinges from which the scroll work springs, the straps are relieved by raised bands and lines produced by the chisel, the nail heads, too, form a natural and pleasant relief. You will notice that a conventional, leaf-like terminal has taken the place of the serpent's head of Norman work. Above, and detached from the three hinges, at the top of the door, is a piece of scroll work which acts as a stiffener and completes the design.

There is an interesting example of this period on the doors of the chapter-house at York; the hinges here are quite distinct, the ornamental work being only used to brace the door together. A feature worthy of note in this example is that the work around the closing-ring or door-handle is bossed out in hemispherical form.

We find another example of this class of work on a door at Chester Cathedral. Here the work is divided into panels of different designs of scroll work; they are all exceedingly graceful and of most finished workmanship.

I have roughly sketched a few details which exhibit the variety of terminations, and also the junctions of the several scrolls. You will notice how ingeniously a leaf is made to lap over and hide the points where the iron is welded together.

The section of the scroll work was sometimes raised to an obtuse angle on the face as at York, or grooved on face as at Chester. In all these examples of work it will be seen that the branches all spring from the outer side of the scroll; these, too, have been somewhat elaborate in character, enriched with leaves or animals' heads, the main bands being stamped with various chisel patterns. Examples of another class were utterly devoid of ornament, or at most had ends terminating in simple curls, with free small branches on each side of the main bands. Our own county affords an example of this at Farringdon Church.

In Decorated work the same style of work continued to be used with little if any variation, except occasionally in the character of the leaves on the scrolls, but as time went on the increased use of wood panelling and tracery superseded this flatter kind of decoration, and rendered scroll work less common than in former times.

In the Perpendicular style hinges are rarely ornamented except on plain doors, when they usually have a fleur-de-lis or some similar decoration at the ends of the strap. For example, on the south door of St. Lawrence. Another local example of thirteenth-century work is at Uffington.

The handles of doors, too, received no small portion of the workman's skill and careful attention. Those of Early English and Decorated date were generally in the form of rings, with a simple spindle going through the centre of a circular escutcheon; but sometimes they assumed other forms, the spindles terminating with a small flower or animal's head at each end to keep it in its place. We have before referred to the escutcheon of the chapter-house at York Minster, which is bossed out, having the straight bars running under it. Another method was to ornament them with minute tracery, or with holes pierced through them in various patterns.

Besides the ring handles, others in the form of a bow were used. These were placed upright on the doors, either fixed or, more often, working in a staple at top and bottom. Not unfrequently the handles were made to drop in the form of a hammer, and were used as knockers, striking on a heavy nail-head fixed under them for the purpose.

The escutcheons were sometimes of considerable size and form, the starting-point of quite an elaborate scroll pattern, which when fastened to the door formed a stiffener, and harmonised well with the elaborate Early English hinges.

The limits of my paper forbid me to dwell longer on ironwork as applied to doors, in which case the work was confined to one plane surface. We will now look at other channels into which the skill of the smith was turned.

In the fourteenth century a new feature was introduced in the handiwork of the smith. Whereas in the past the hammer and the tongs were the principal tools employed, the manipulation of sheet iron required other treatment. When first introduced the effect was pleasing and simple; but the artist-smith, led away by the greater ease of manipulation which the thinner metal afforded, soon rushed into elaborate and extravagant detail and an imitative style, rather than originality of detail adapted to the material employed. The idea of impropriety is conveyed by an examina-

\* A paper read at a meeting of the Berkshire Archæological and Architectural Association by Mr. Chas. Steward Smith, A.R.I.B.A., of Reading, on Thursday, January 24.



tion of an example of sixteenth-century Japanese metal-work at the South Kensington Museum. It represents a sea-eagle in hammered and chiselled iron. The bird is swooping from a rock with extended wings. Nothing can exceed the perfection of workmanship displayed in this example. Feather by feather has been imitated in the iron, and with a perfectly natural effect, and yet it seems unfortunate that so much skill and labour should have been expended in such an inappropriate manner.

Perpendicular metal work is of very considerable merit, harmonising well with the sister materials, wood and stone, and keeping apace with them in point of characteristic design. One of the finest examples is the enclosure to Henry VII.'s tomb at Westminster. The screen to the tomb of Edward IV. at St. George's Chapel, Windsor, is an example worthy of special notice in speaking of work of this period. A monument to the honour of Edward seems to have been in course of erection at Windsor during his lifetime, but was never completed. For this tomb this splendid piece of tabernacle work in iron was doubtless intended to be the screen. The framework is of wrought bar iron, and the small rich Gothic compartments are of plate iron cut with a sharp punch.

The screen has a projecting semi-octagonal turret-like form on each side, divided into bays by buttresses which run up the whole height. The spaces between the buttresses are filled up with traceried openings very like the windows of that period. Each bay is surmounted by an overhanging canopy of very fine and elaborate workmanship. The space between the turret-like forms is divided into six bays, which are treated in a similar manner to those before mentioned.

The thought that strikes one on seeing this beautiful piece of workmanship is that it partakes rather of the character of a model of a stone structure than bearing itself an individuality of treatment with a self-evident purpose for its existence. It has generally been attributed to Quentin Matsys, the famous Antwerp blacksmith and artist, but it appears that a certain John Tresilian was the person who wrought the screen in question. Nevertheless, the name of Quentin Matsys will still live in our memories on account of his admirable picture of *The Misers* in Windsor Castle and the romantic story of his love at Antwerp.

When at Windsor last week I was struck with a very fine and much earlier piece of ironwork on the interior of the east door of the choir of St. George's. This probably belonged to the original building before the present chapel was erected. I should here like to mention the kind courtesy shown me by the very Rev. the Dean of Windsor in giving me access to the many objects of interest at St. George's, and also in suggesting authorities on their history.

The existing examples of Elizabethan ironwork are scarce, but a few lock plates, hinges, &c., that I have noticed have been marked by a characteristic treatment. I have made a sketch of an interesting specimen of local Jacobean work at Hurst Church (fig. 4). It is a bracket for an hour glass bearing the date 1636. It is now painted and gilded; the initial letters probably refer to the donor, but its origin is unknown.

I have a sketch, too, of a very humble but nevertheless interesting bit of work from our own county (fig. 6). It is the latch of a cottage door at Stanford-in-the-Vale; it is cut from a piece of plate iron, with a bow handle of circular section. A further example of domestic work in this century is a knocker from East Grinstead, Sackville College, bearing the date 1616; it is of the simple drop arrangement, like those of a much earlier date, but is divided towards the top into two arms which work in a pair of staples. I have made some sketches of an example of Jacobean work at the South Kensington Museum, which illustrates very forcibly the powers of the English smith. It is a screen formerly separating the pew of the Leveredge family from the Lady Chapel in the church of St. John, Frome. This specimen is singularly happy in design, and delicate in execution. The composition gives due importance to the central feature bearing the armorial shield, while the side panels are agreeably diversified. The general size of main bars is  $\frac{1}{2}$  inch by  $\frac{1}{2}$  inch. The lines of hammered work are not obliterated by sheet work, although there is quite sufficient of the latter to give a richness of design.

I shall now pass on to notice those examples of wrought ironwork so well known to all who have visited South Kensington Museum, namely, the screens from Hampton Court. They are twelve in number, and were formerly placed at intervals of 50 yards in the fence dividing the Palace Home Park from the garden, but falling into decay they have found a suitable refuge in the museum.

We are told that we are indebted to a blacksmith of Nottingham, named Shaw, for these matchless works of art. Shaw received his commission from King William III., but as the king died before the completion of the work, or at least before the screens were paid for, the Parliament of the time repudiated the debt, and Shaw, it is said, died from disappointment at the age of fifty-one. He was buried at Hampton Church, and we find a tablet outside the church recording the fact, and very charitably describing him as "an artist in his own way," which probably meant that he was neither a painter nor sculptor. His claim to be an artist was doubtful, even in the face of the magnificent work

which his brain had conceived and his artistic hammer and chisel had enabled him to carry out. Is there not a tendency in these days to disregard art because of the source whence it springs, and to assume that artistic genius can only run in channels cut out by officially constituted institutions?

The screens are 13 feet wide by 11 feet high, and altogether exhibit a wonderful amount of labour and ingenuity. The general construction of the whole series is of one pattern, but four of them are of richer detail than the others. The supporting standards on each side are two panels 2 feet wide, formed of uprights 2 inches square, filled in with a pattern of inch bars, and supported by stays. Between these is a foliated composition of elliptic scroll work with bold foliage and flowers, surrounding a panel about 3 feet square, which in the four principal screens enclose representations of the national emblems—a rose, a thistle, and a harp—the remainder being filled in with a diaper pattern. Above this is a heavy swag or chain of flowers, hanging from the beaks of eagle-headed scroll terminations, and crowning the whole is a foliated mask with a figured and tasselled apron. All the detail is wonderfully wrought out, the small rosebuds and sprays being represented with great fidelity to nature. It is curious that although the workmanship in an artistic point of view is so good, the construction of the ornament is proportionately bad. Very few of the scrolls or stems are welded at the junctions, but are simply united by iron tongues and pins, the heavy strains on which in some instances have caused them to give way.

The leafage, too, which in the most ordinary gateway of the period was always welded to the stems from which it springs, is here merely rivetted or screwed to the larger branches in several pieces.

Most of us remember the magnificent screens at St. Paul's Cathedral. They are the work of a Frenchman named Tijon, a Protestant refugee. In these we see distinctly the master designer's hand, but more freedom was left to the workman in those days than now, and we notice a refinement which characterises these screens when compared with the Hampton Court gates. We here have an opportunity of judging of the relative merits of French and English workmanship. I have an illustration of these gates which gives a good idea of their design.

As a comparison with the English work which we have been studying, it will be interesting here to look at one or two sketches of German work. We have just been noticing applied ornament such as foliage, wrought in thin iron, and attached by pins and rivets to the scroll work, as at Hampton Court and elsewhere. But a peculiar feature in German work is the structural ornament in the form of figures worked in the solid as continuations of the scroll bars. Nevertheless these often in addition had leaves and foliations of sheet iron attached. The foliage here grows naturally out of the main lines, to which it is kept in subordination. The terminations of the voluted scroll are points in the design which fitly receive ornamentation, and this detail alone deserves attentive study. In examining these examples of smiths' work, we are struck with the mastery displayed in manipulating the material—whether cold or hot—with the methods by which combinations of forged work, hammered work, or *repoussé* work were effected, and the complete adaptation of the means to the end in view.

The realisation of the design already worked out in the mind of the artist-smith is evident in all the best and most representative works. The material and modes of manipulation persistently demanded that the smith should know exactly where he was going before he set out, and every curve had to be carefully laid down full size on the blackened and charred board, the surface of which displayed the chalk lines he was to follow by the aid of his anvil and vice.

A very fine example of this is the German window grating in the South Kensington Museum, of which I have a sketch (fig. 7). In the centre we have a fret or lattice-formed figure, resulting in a quatrefoil of interlaced scrolls; out of these scrolls spring spiral curves, bearing foliage of a highly decorative character, and yet the details are all simple and in perfect unity with the purpose of the work as a round-headed window grating, while the scope afforded for the workman has been fully taken advantage of.

The scheme of the design is of the simplest kind. The details supplement the arrangement of the curves, and naturally fall into the spaces not occupied by the leading lines. The lunette form seems to naturally suggest the filling in; and on analysis one can see that the growth of the whole is symmetrical, and comes almost as a matter of course from the fret-like figure which is the centre feature of the work. The larger and secondary scrolls have terminals of forged and twisted iron, welded into the main lines, the tendrils being used at certain points to bind the whole together in a very ingenious manner. The broader details are of *repoussé* and shell work, consisting of rosettes of different sizes and broad leaves of an ornamental grotesque type in imitation of a mask or human face. These are rivetted to the points of the scrolls to which they form the terminals.

We come now to what I think by no means the least interesting part of our subject—the ironwork of the Early Georgian period. Interesting to us because it tells us of those days when work was well and carefully done—those days when, if sanitary science were treated with contempt, there was a thoroughness and strength in



building which is too often wanting now. This period of ironwork is interesting because we frequently meet with specimens in our everyday walks. In our town there remain a few examples, for instance, which are not unworthy of notice—a neat little bit of scroll work in the form of a spandril outside the Conservative Club, and there is an uncommonly good specimen or two as railings round the tombs in St. Giles's Church (fig. 8). It is a matter for great regret that a fine bit of old work like this should be allowed to decay for the want of a little attention and trouble.

I have here two or three sketches of work in and around London (fig. 9), that in Great Ormond Street, Bloomsbury, being specially worthy of careful study (fig. 10). To my mind there is a great charm about these old brick mansions. If they were unpretentious in appearance, they were at least as strong as well-burnt brick and honest workmanship could make them. Their timber was sound and well seasoned, and their foundations ample, while their internal fittings were spirited in detail and laudable in execution; and the wrought iron introduced to decorate their façades in the shape of gates and area railings was designed in harmony with the nature of the material employed. This idea of producing an ornament consistent with the material is a special feature of work of this period; for, much as we admire the sheet-metal foliage in the gates at Hampton Court, we can but regret that its construction is so bad and durability so questionable.

It has well been said that the great principle in designing wrought iron is to produce a design composed of bars or lines connected together in such a manner as to combine lightness and strength, and this idea was realised in the period which we are examining. The bars were manipulated in various ways: of sections round, square, or moulded; and the combinations of straight and curved lines offer an endless variety of pattern.

I should like to call your attention to the terminations of the voluted scrolls as points in this class of work especially deserving notice. A great variety of these were evolved out of the two principles of spreading the end, in one case in the depth of the bar, in the other in its width. The spandril piece from the railings at Bloomsbury is a fine example of these treatments. These methods, in their simplest form, with a parallel treatment and a variation of round and flat iron are generally found used together in our English work of the period, giving a diversity to otherwise similar forms. It is difficult to conceive a more appropriate form of fence than the area railings of the last century, which are familiar to us all, with their standard panels at intervals in the assemblage of square bars.

The bold form of spear head and occasional ramp with the now obsolete lamp bracket and torch extinguishers quite sufficiently relieve the design from tameness, for there is often more character in a simple forging than in many pretentious patterns drawn from the sand mould, as a comparison between the spear heads I have mentioned and the usual run of cast railing will testify.

Very many happy little bits of wrought ironwork are to be seen on the signboard standards of our village inns, and in one or two instances I have seen the wrought-iron brackets which bear the pawnbroker's sign possessing (to use a pet phrase in a recent trial) considerable artistic merit. A fair idea of work of this period can be obtained from some of the capital illustrations by Mr. R. Caldecott in his children's books, and a plate issued with the *Graphic* some few years since called *Out of Reach* has a fine example of wrought iron.

I must now bring my paper to a conclusion, with an apology for its somewhat discursive character, but, as I told you at the beginning of the evening, it is rather a collection of notes than the expounding of any original principle or theory.

I have tried to give you just enough of each period to assist you in recognising it when you casually meet it again, to assign to it an approximate date, and if we learn any lessons of care in details, propriety of material, and prominent purpose of design from the departed workmen in this branch of art manufacture, we shall be amply repaid for the time spent in its study.

## REVIEWS.

LES ARTS DU BOIS, DES TISSUS ET DU PAPIER. Paris: A. Quantin.

It is generally supposed that there is less opportunity for co-operation in France than in England, and that everything has to be done in that country by the State. But the existence of the Union Centrale des Arts Décoratifs might be cited to demonstrate how little truth there is in such a supposition. Although there are many societies of artists in England, there is not one that exactly corresponds with it. The nearest approach to the Union Centrale is, perhaps, the Arts Club in Liverpool and the Burlington Club in London. The members of the Union, in addition to many other descriptions of honorary work, have organised annual exhibitions of decorative art, which in some respects resemble the periodical display of loan collections at South Kensington, and in others correspond with the ordinary exhibitions of pictures and statues. We can testify that these exhibitions entail an enormous amount

of labour on the organising committee, and, so far as we have been able to judge, the success, if judged by the number of visitors, is not commensurate with the preliminary toil.

The contents of the exhibitions are unknown outside France; but, as the opportunity has been utilised of preparing monographs on the different departments, students all over the world will be enabled to profit by the labours of the Union Centrale. In the volume which has been issued by M. Quantin the subjects treated are industrial art as applied to wood, textile fabrics, and paper. At first sight it may not be evident how much is included under so simple a title. Wood comprises figure sculpture, both in the round and in relief, and decorative furniture, whether of wood alone or of wood in combination with other materials. The examples selected are from the principal collections in France, and represent the works of the greatest artists. There is no hard-and-fast line drawn, and thus we have also works mainly in bronze or the precious metals, and in marble. Under the head of Tissues we find tapestry and other descriptions of weaver's work, embroidery of all kinds, lace, printed and painted fabrics. Paper includes illumination, early printing and wood-cutting, engraving, and bookbinding, wall-papers, &c. There are special essays on modern furniture and on Japanese art. When it is said that the work is embellished by more than three hundred reproductions of beautiful drawings by M. Libonis and other artists, and that the authors of the different monographs—MM. De Champeaux, Darcel, Gaston le Breton, Gasnault, Germain Bapst, Duplessis, Broux de Mailion, and Victor Champier—are all recognised as authorities, the value of the volume will be evident. It is an admirable example of the class of books which the French artist has at his service, and by which he is enabled to contend with so many rivals in other countries.

DILAPIDATIONS. By BANISTER FLETCHER, F.R.I.B.A. Third Edition. B. T. Batsford.

On the subject of dilapidations there are not many architects who have a better claim to be regarded as an authority than Mr. Banister Fletcher. The worth of his book is shown when it is found to have reached a third edition—an amount of success which few professional works have the good fortune to attain. The legal portion of the new edition has been revised by Mr. E. A. Bullen, barrister. The use of the book is not restricted to tenants, and a perusal of the pages would often enable a tenant to understand his risks, especially under repairing leases.

THE DECORATOR'S ASSISTANT. A. J. Barnes & Co.

In this little book there are upwards, it is said, of six hundred recipes; some of them are rather obsolete, but a large number will have their use for people who prefer to make their own varnishes, dyes and other preparations, and for amateurs who wish to have the whole of a process explained in a few lines. Taken as a whole, it is a remarkable collection, and a reference to the recipes may often save the labour of hunting for information in special treatises.

PAINTING AND PAINTING MATERIALS. By CHARLES CONDIT and JACOB SCHELLER. E. & F. N. Spon.

It would seem that the primary object of this sterling book is to give information respecting the painting of railway carriages, which in America are completed in an elaborate style. To attain this end, which might be considered to be the summit of craftsmanship, the theory and practice of painters' work are explained, so that the volume will be serviceable in all branches of the trade. Great care has been taken in the compilation, and the investigations of a larger variety of authors, and of a better class, have been utilised than we usually find in books of this kind. It was at one time said that the best compilations were those of Frenchmen; but on practical subjects the Americans are taking the lead, and "Painting and Painting Materials" is a good type of what is being done. The quality of the book is not to be judged from the frontispiece and ornamental letters, which are not in keeping with the contents.

## SCHOOL BUILDINGS.

**New Basford.**—Baptist Sunday schools, situated in Chelsea Street and Duke Street, have been opened. The style of architecture is decorated Gothic, and the building comprises nine classrooms and an infants' room on the ground floor, with a large assembly room above, capable of accommodating 450 scholars. The platform at one end of the room will provide accommodation for a choir of forty voices. Mr. Lawrence Bright, architect, St. Peter's Church Walk, Nottingham, prepared the plans, and the contractors were Messrs. Dudson & Parrish, New Basford. The building has been erected at a cost of 1,800*l*.

**Southampton.**—Sunday schools erected at the rear of Portland Baptist chapel have been lately opened. The building is solidly constructed, the exterior being faced with white bricks, relieved with Bath stone dressings and string courses. The building is three storeys in height, and contains on the basement floor lecture-room, 35 feet by 20 feet, communicating with the previously existing schoolroom by large folding doors, which can be thrown into



one as occasion may require. This floor has also been fitted with separate lavatories and offices for boys and girls, kitchen, &c. The principal floor is of the same level as that of the chapel. It comprises committee or Dorcas room, two class-rooms, minister's vestry, gentlemen's and minister's lavatories, &c. The first floor contains five class-rooms of varying sizes, new organ-chamber, ladies' lavatories, and book stores; while new approaches are provided to the north and south galleries of the chapel. The staircases have been constructed wholly of pitch-pine, and a small class-room has been formed in the tower over the same. Special attention has been directed to the ventilation, each class-room being provided with an inlet for fresh and outlet for foul air. Mr. W. H. Mitchell, of Portland Street, Southampton, was the architect, under whose personal superintendence the work has been carried out in an efficient manner by Mr. H. I. Sanders, builder, of Northam. The gasfittings were executed by Messrs. Lankester & Son.

**Midgley.**—New Connection Sunday schools have lately been opened. The buildings have been erected from the plans of Mr. Thomas Horsfall, of Manchester. The contractors were, mason work, Mr. Thomas Pickles, Midgley; joiners' work, Mr. Edwin Marsland, of Booth; slater and plasterer, Messrs. J. & T. Alderson, Luddenden; plumber and glazier, Messrs. Jonas Alderson & Sons, Luddenden Foot; painting, &c., Mr. Heap Uttley, of Hebden Briage; warming apparatus, Mr. J. H. Boulton, of Halifax. The total cost has been about 1,400*l*.

### NEW BUILDINGS.

**Liberal Club, Newcastle-on-Tyne.**—The old posting-house, the Queen's Head in Pilgrim Street, has been transformed into the Junior Liberal Club. The old staircase, which is the finest in the town, and as far as practicable the other features, have been retained. The club has thus a familiar appearance for the members and a comfortable air that is attractive. The alterations and improvements have been made from the plans of Mr. Knowles, of the firm of Newcombe & Knowles, Newcastle. The contractor for general work has been Mr. J. Smart; for plumbing-work, Mr. R. Herron; and for decorator's work, Mr. John Gibson; and Messrs. Henry Chapman & Son, Northumberland Street, have supplied the furniture. The whole of the work has been carried out under the immediate superintendence of the architect, Mr. W. H. Knowles.

### SANITARY WORKS.

**Fulham Infirmary.**—The housing of the poor is a question of very general and earnest discussion. How far practical results will follow time will reveal. The sick poor, however, are evidently well cared for in a commendable way. As an instance of this, we refer to the new infirmary which has been recently erected in Palace Road, Fulham. Admirably designed as the building is by the architects, Messrs. Giles & Gough, they have found excellent coadjutors in the guardians of Fulham Union as regards the important matter of warming and ventilation. To a committee of their body was entrusted the duty of selecting the best stove for the purpose. A few of the leading manufacturers were therefore invited by them to submit their stoves in competition, and, after a very careful trial, the "War Office Ventilating Air Stove," manufactured by Messrs. Yates, Haywood & Co., of Rotherham, and No. 95 Upper Thames Street, London, was deemed the fittest and most efficient. It has consequently been chosen for all the sick wards of the infirmary, which number about thirty. This stove, we understand, has already been extensively used for entrance halls and mansions, as well as for hospitals, barracks, hotels, and railway stations. No question is being considered of more vital importance than that of good and efficient warming and ventilation.

### GENERAL.

**Mr. Armstead, R.A.,** has been commissioned to execute the memorial statue of the late Bishop of Llandaff.

**The Sale of Pictures** at the recently-closed exhibition of the Birmingham Royal Society has amounted to nearly 5,000*l*.

**The Dunfermline Fine Art Exhibition** closed last week, after being open six weeks. A sum of 1,350*l*. was received during that time from the sale of pictures.

**A Paper on Celtic Art** was read by Mr. R. Thornton Shiells at the meeting of the Edinburgh Architectural Association on Wednesday.

**Messrs. Clark & Moscrop,** of Darlington, have been appointed architects for the new vicarage at Hipswell, near Catterick. Four local architects were invited to compete by the Trustees.

**Welham Hall,** in East Yorkshire, a fine old mansion, the residence of Mr. Robert H. Bower, J.P., has been destroyed by fire. A valuable collection of pictures and the family plate were all that was saved. The origin of the fire is attributed to the overheating of a flue.

**A Landscape** by Mr. Carl Heffner has been purchased by the trustees of the Sydney National Gallery.

**A Committee** for the organisation of the great Universal Exhibition at Antwerp in 1885 has been definitively constituted, under the presidency of M. Victor Lynen, one of the principal merchants of Antwerp. Work will be commenced in April next.

**An Episcopalian Church** is to be erected at Thurso from the designs of Mr. A. Ross, of Inverness. Among the contributors to the building fund are Mr. Gladstone, the Bishop of St. Albans, the Duke of Buccleuch, the Earl of Glasgow, the Earl of Home, Earl Wharnccliffe, Lord Forbes, and Sir Tollemache Sinclair, M.P.

**Birmingham Architectural Association.**—The third ordinary meeting of this association was held at the Queen's College on Tuesday evening, Jan. 15, under the presidency of Mr. W. H. Kendrick. The following new members have been elected:—Messrs. D. Arkell, J. Cotton, W. Read, B. McEvoy, A. H. Knott, and H. Beck; and two other gentlemen have been nominated for membership. A paper was read by Mr. Victor Scruton on "Life, death, and futurity in Architecture," followed by a discussion and a hearty vote of thanks, in which the following members joined:—Messrs. J. Cotton, H. H. McConall, F. G. Hughes, T. W. F. Newton, and the hon. secretary, Franklin Cross.

**Mr. Thomas Bolas** will deliver, on Monday next at the Society of Arts, the first of a course of Cantor lectures on "Recent Improvements in Photo-Mechanical Printing Processes," in which he will deal with new developments of the Woodbury Type process. The second lecture, on February 4, will be on type blocks from line-drawings and half-tone subjects; and the third and concluding one on February 11 will be devoted to the consideration of intaglio plates, collotypes, photo-mechanical methods as applied in the decoration of pottery and miscellaneous processes.

**Mr. H. H. Gibbs** has undertaken the restoration of the high altar screen at St. Albans Abbey, including the insertion of sixty-five statues, and the replacing of the crocketed pinnacles. The work will be carried out under the direction of Mr. Chapple. Sir Edmond Beckett intends to remove the roof of the north aisle, and to reinstate it at its original height. The roof of the south transept will subsequently be dealt with.

**The Gravesend School Board** have adopted plans by Mr. Gosling for proposed schools in Milton Road.

**The Report of the Royal Commission** on Technical Instruction will, it is stated, be issued early in February.

**The Rochester Churches Fund,** for the building of ten churches, has reached 42,350*l*. 16*s*. 10*d*., making it necessary to raise a further sum of 8,000*l*. in order to build the remaining two churches on the list. A public meeting will be held at Willis's Rooms on February 26, when steps will be taken to raise the balance required to complete the fund.

**Mr. C. Purdon Clarke** has arranged for the representation of an Indian village and tea garden at the forthcoming International Health Exhibition. Natives are to be brought over from Bombay and Darjeeling to complete the scene.

**Mr. J. Earnshaw,** Bridlington Quay, has been appointed architect for new Board school at Thwing, East Yorkshire.

**The Commissioners of Sewers** have adopted a resolution that it is necessary to abolish the house-tax, to give greater facilities for the erection of artisans' dwellings.

**The Annual Distribution** of prizes to the Battalion of the 20th Middlesex R.V., "Artists," will take place to-day (Saturday), at the Criterion, when the chair will be taken at 6 P.M. by Lieut.-Col. Edis, F.S.A., commanding. The prizes will be presented by the honorary colonel of the regiment, Sir F. Leighton, P.R.A. The annual regimental dinner, to which the Adjutant-General, General Lord Wolseley, K.C.B., &c., Lieut.-Gen. Higginson, C.B., commanding the Home District, Major-General Elkington, C.B., and others have accepted invitations, will take place immediately after the distribution of prizes.

**Messrs. Strode & Co.** have supplied all the fittings and other appliances for the lighting, both by gas and the electric light, of the new Prince's Theatre, in Coventry Street, and there has been general approval of their arrangements.

**Lowe's Wood Block Flooring** has been adopted after special investigation of its qualities by the Midland Railway Company for the extensions to their hotel at Derby. It will be laid on a bed of concrete.

**The Surveyors' Institution.**—Upwards of 100 candidates have entered their names for this year's examinations—54 for the preliminary examination to be held during the present week, and 50 for the professional examinations in April. The latter number comprises 40 candidates in the land agency, valuing, and building-surveying sections of the Associates' Examination, and ten in these sections of the Fellowship Examination. Many of the candidates are past or present students at the Agricultural Colleges, the City of London College, and other places of technical and scientific education. The institution now numbers upwards of 1,000 members, of whom nearly 500 have been elected since the incorporation of the institution by Royal Charter two years ago. Of this number 580 hold the fellow's diploma, and 263 the diploma of professional associate.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JANUARY 26, 1884.

### TENDERS, ETC

As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

### EDITORIAL NOTICES.

The authors of signed articles and papers read in public must necessarily be held responsible for their contents.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

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### COMPETITIONS OPEN.

ABERDEEN.—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10s. 6d. to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

BLOEMFONTEIN.—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

CAPE TOWN.—Jan. 30.—The Town Council of the City of Cape Town invite Plans and Specifications, accompanied with approximate estimate of cost, of a System of Drainage. Selected Plans and Specifications to become the absolute property of the Corporation. All others will be returned free of expense. Premium of 25%. A plan of the City, with levels, may be seen, and further information may be obtained, on application to the South African Loan, Mortgage, and Mercantile Agency, 9 King William Street, London, E.C.

LEICESTER.—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

LONDON.—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

NEWCASTLE-ON-TYNE.—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

ST. PANCRAS.—Feb. 1.—Designs are invited for Buildings for Mortuary and Coroner's Court. Mr. T. Eccleston Gibb, Vestry Clerk, Vestry Hall, St. Pancras Road, N.W.

UXBRIDGE.—Jan. 31.—For System of Sewerage and Sewage Disposal. Mr. Charles Woodbridge, Clerk to the Rural Sanitary Authority, Uxbridge.

### CONTRACTS OPEN.

ABERDEEN.—Jan. 26.—For Supplying, Erecting, Fixing and Testing Hydraulic Machinery, for the new Dock Gates, Victoria Dock. Mr. Wm. Smith, Harbour Engineer, Aberdeen.

ADWIE.—Feb. 6.—For Construction of Iron Lattice Girder Bridge. Mr. Barnett, C.E., Waterloo Station, Aberdeen.

ANCRUM.—Jan. 26.—For Building Police Station. Mr. J. C. Walker, Architect, Circus Place, Edinburgh.

BACUP.—Feb. 2.—For Building Chapel and School at Troughgate, Britannia. Messrs. Maxwell, Take & Hurst, Architects, 175 Lord Street, Southport.

BELFAST.—Jan. 28.—For Building Block of Shops and Offices. Messrs. Young & Mackenzie, Architects, 7 Donegall Square East, Belfast.

BELFAST.—Jan. 29.—For Rebuilding Business Premises and Dwelling-house, Main Street, Bangor. Mr. John Boyd, Architect, 9 Donegall Square West, Belfast.

BLACKBURN.—Jan. 29.—For Separate Works in the Erection of Infirmary at the Union Workhouse. Mr. James Aspinall, Architect, 2 Victoria Street, Blackburn.

BLACKPOOL.—Jan. 29.—For Construction of Gasholder Tank. Mr. Chew, Engineer, Gas Office, Blackpool.

BLACKROCK.—Feb. 1.—For Additions to Sandymount House. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

BRADFORD.—Jan. 30.—For Building Combining Shed, Engine House, Warehouse and Stabling, Caledonian Mills. Mr. Herbert Isitt, Architect, Queen Anne Chambers, Sun Bridge Road, Bradford.

BURNLEY.—Feb. 2.—For Building Baptist Schools. Mr. H. Smith, Architect, 25 Nicholas Street, Burnley.

BURSLER.—Jan. 30.—For Building Church at Porthill. Mr. A. R. Wood, Architect, Tunstall.

CIRENCESTER.—Feb. 5.—For Construction of Brick Gasholder Tank. Mr. T. Newbigging, C.E., 5 Norfolk Street, Manchester.

DARLINGTON.—Jan. 26.—For Erection of Free Library Buildings. Mr. G. G. Hoskins, Architect, Northgate, Darlington.

EASTBOURNE.—Jan. 31.—For Erection of Town Hall and Municipal Buildings. Mr. Charles Tomes, Borough Surveyor, Eastbourne. Mr. W. Tadmam Foulkes, Architect, 100 Colmore Row, Birmingham.

EBBY VALE.—Jan. 26.—For Building Hotel and Stables. Mr. E. A. Johnson, Architect, Abergavenny.

ECCESTERS.—Feb. 9.—For Building Board School at Burncross. Messrs. Wilson & Masters, Architects, Hartshead Chambers, Sheffield.

ECKINGTON.—Feb. 1.—For D'version of Main Sewer. Mr. Robert Butterworth, Surveyor, St. Helen's Street, Chesterfield.

FELIXSTOWE.—Feb. 5.—For Building Fourteen Houses. Mr. William Eade, Architect, Post Office Chambers, Ipswich.

FORRES.—Feb. 2.—For Building Coach Factory. Mr. J. Milne, Architect, Elgin and Forres.

HALIFAX.—Jan. 31.—For Building two Shops and Dwelling-houses. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

LARNE.—Feb. 1.—For Building Olderfleet National School. Mr. S. P. Close, Architect, Waring Street, Belfast.

LEEK.—Jan. 26.—For Reconstruction and Enlargement of Primitive Methodist Chapel and Schools. Messrs. W. Sugden & Son, Architects, Le.k.

LITTLEBOROUGH.—For Extension to Methodist Free Church. Messrs. Potts, Pickup & Dixon, Architects, Oldham.

LOCHGILPHEAD.—Jan. 30.—For Building Church. Mr. John Honeyman, Architect, 140 Bath Street, Glasgow.



**LOCHMARREE.**—Jan. 26.—For Additions and Alterations, Letterewe House. Messrs. Matthews & Lawrie, Architects, Inverness.

**MEXBOROUGH.**—Feb. 4.—For Construction of Iron Pipe Sewer (2,200 yards), with Manholes, Lampholes, Flushing Tanks, &c. Mr. George White, Engineer to the Local Board, Market Hall, Mexborough.

**MIRFIELD.**—Jan. 39.—For Sewerage Works (Contracts 3 and 4). Mr. F. H. Hare, Engineer, Local Board Offices, Mirfield.

**MOUNTAIN ASH.**—Feb. 3.—For Building 100 Workmen's Houses. Mr. Walter Bell, Merthyr Vale, Merthyr Tydfil.

**NORTHAMPTON.**—Feb. 1.—For Building Lock-up on Race Course. The Surveyor, Guildhall, Northampton.

**NORTH SONDERLAND.**—Jan. 28.—For Construction of Two Sea Piers and Works in connection. Mr. I. Watt Sandeman, C.E., 2 St. Nicholas Buildings, Newcastle-on-Tyne.

**NORMANTON.**—Jan. 31.—For Erection of School Buildings. Rev. P. T. Yarker, Normanton.

**NOTTINGHAM.**—For Building Ten Dwelling-houses and Stables. Mr. W. Graham Lees, Architect, King John's Chambers, Nottingham.

**PETERBOROUGH.**—Jan. 31.—For Pulling-down Buildings and Erection of Shops and House Premises. Mr. Laurence Bright, Architect, 9 St. Peter's Church Walk, Nottingham.

**PONTYPRIDD.**—Jan. 30.—For Building Twenty-three Cottages. Mr. T. R. Phillips, Architect, 20 Market Square, Pontypridd.

**RHAYADER.**—Feb. 1.—For Alterations and Additions at Cefnaes. Mr. S. W. Williams, County Surveyor, Rhayader.

**RIO DE JANEIRO.**—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

**SALISBURY.**—Feb. 5.—For Taking-down Buildings and Erection of Police Cells. The Surveyor, Municipal Offices, Endless Street, Salisbury.

**SHEFFIELD.**—Jan. 30.—For Building Stables, Stores, and Sheds, Union Lane. Mr. John Clark, Architect, 38 Norfolk Street, Sheffield.

**SMETHWICK.**—Jan. 31.—For Building Smallpox Hospital and Lodge. Messrs. Harris, Martin & Harris, Architects, 119 Colmore Row, Birmingham.

**SOLIHULL.**—Jan. 29.—For Additions and Alterations to Union Workhouse. Mr. F. B. Endall, Architect, Solihull.

**SOUTHALL.**—Jan. 28.—For Erection of Staircase at Schools. Messrs. H. Saxon Snell & Son, Architects, 22 Southampton Buildings, Chancery Lane, W.C.

**SOUTHAMPTON.**—Feb. 8.—For certain Alterations at Municipal Offices. Mr. W. B. G. Bennett, Borough Surveyor, Southampton.

**SOVERBY BRIDGE.**—Jan. 23.—For Building Cartwright's Shop (two storeys) and Dwelling-house, Allen Road. Mr. Charles F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

**ST. ALBANS.**—Jan. 29.—For Building Cemetery Lodge and Entrance. The City Surveyor, St. Albans.

**STOCKTON-ON-TEES.**—Jan. 23.—For Building Church of St. Paul. Mr. J. P. Pritchett, Architect, 24 High Row, Darlington.

**STRATFORD-ON-AVON.**—Jan. 30.—For Alterations and Additions to House. Mr. A. T. Davis, Borough Surveyor, Stratford-on-Avon.

**SUNDERLAND.**—Feb. 5.—For Construction of Gasholder Tank. Messrs. T. & C. Hawksley, C.E., 30 Great George Street, Westminster.

**SWINDON.**—Jan. 26.—For Taking Down and Rebuilding Dwelling-house, &c. Mr. T. S. Lansdown, Architect, Swindon.

**TAMWORTH.**—Feb. 1.—For Erection of Buildings at Alders Paper Mills. Mr. J. Moxon, Architect, 55 Church Street, Barnsley.

**THWING.**—Feb. 5.—For Building Board School at Thwing. Mr. J. Earnshaw, Architect, Bridlington Quay.

**WAKEFIELD.**—Feb. 4.—For Building Four Houses and Shops. Mr. John Vaughan, Gaskell Villas, Thorne, Wakefield.

**WALLASEY.**—Jan. 31.—For Enlargement of New Brighton Pier. Mr. A. Dowson, C.E., 3 Great Queen Street, Westminster.

## TENDERS.

### BILLINGHAY.

For Building Board School for Girls and Infants, Billingham.	
Greenfield, Boston . . . . .	£856 10 0
Newton, Ekington . . . . .	841 0 0
Hobson, Hogsthorpe . . . . .	837 0 0
Bellamy & Todkill, Wisbech . . . . .	789 15 0
Hatchiffe, Billingham . . . . .	765 0 0
Wallis & Son, Spalding . . . . .	719 0 0
Knight, Martin . . . . .	710 10 0
HOLMES, Wainfleet (accepted) . . . . .	687 10 0

### BEDFORD.

For Building the Bedford Town and County Club, Bedford.	
Mr. HENRY A. CHEEKS, Architect.	
Smith, Bedford . . . . .	£3,772 0 0
Everett, Colchester . . . . .	3,769 0 0
Walton, Bedford . . . . .	3,766 0 0
Loughton, Bedford . . . . .	3,636 0 0
Saint, Cambridge . . . . .	3,591 0 0
Wilmot & Son, Banbury . . . . .	3,590 0 0
Harrison, Bedford . . . . .	3,540 0 0
Woods, Weybridge . . . . .	3,499 0 0
Dover, Oxford . . . . .	3,490 0 0
Miskim, St. Albans . . . . .	3,487 0 0
Hull, Bedford . . . . .	3,450 0 0
Haynes, Bedford . . . . .	3,415 0 0
Hull, Cambridge . . . . .	3,401 0 0
Foster, Bedford . . . . .	3,375 0 0
Underwood, Wellingborough . . . . .	3,366 0 0
Foster, Rugby . . . . .	3,333 0 0
Botterill, Reading . . . . .	3,295 0 0
Bunn, Luton . . . . .	3,095 0 0
Wilkins, Maidstone . . . . .	3,088 0 0
IRESON, Northampton (accepted) . . . . .	3,000 0 0

### BLOXWICH.

For Patent Heating Apparatus, Public Offices. Mr. F. C. BAILEY, Walsall, Architect.	
Accepted Tender.	
Gibbs, Toxteth, Liverpool.	

### BRIDLINGTON.

For Heating new Wesleyan Chapel, School, &c., Bridlington. Mr. J. EARNSHAW, Architect.	
PERKINS (accepted) . . . . .	£200 0 0

### BRIDLINGTON QUAY.

For Building Two Houses, Bridlington Quay, for Mr. H. Ellis. Mr. J. EARNSHAW, Architect.	
Hudson . . . . .	£585 0 0
Clark . . . . .	450 0 0
Mainprize . . . . .	450 0 0
Leeson . . . . .	375 0 0
RENNARD (accepted) . . . . .	370 0 0

For Alterations to Wesleyan School, Bridlington Quay. Mr. J. EARNSHAW, Architect.	
Storr & Son . . . . .	£69 0 0
MAINPRIZE (accepted) . . . . .	65 0 0

### CALVERLEY.

For Rebuilding Hollypark Mills, Calverley. Mr. JOWETT KENDALL, Architect. Quantities by the Architect.	
Accepted Tenders.	
Obank & Sons, Idle, mason and joiner.	
Stead & Sons, Cleckheaton, ironfounder.	
T. & A. Thornton, Ecclehill, slater.	
Higginbotham, Idle, plumber.	
Padgett, Idle, painter.	
A. & S. Wheeler, Calverley, concrete work and plasterer.	
Total, £3,773 11s.	

### CARDIFF.

For Patent Heating Apparatus, National Bank of Wales. Messrs. BLESSLEY & ASPINALL, Architects.	
Accepted Tender.	
Gibbs, Toxteth, Liverpool.	

### DARTMOUTH.

For the Erection of a Villa Residence at Coombe, Dartmouth, for Mr. Charles Emmett. Mr. E. H. BACK, Architect, Dartmouth. Quantities supplied by the Architect.	
Rundell, Kingsbridge . . . . .	£629 0 0
Winsor, Dartmouth . . . . .	605 0 0
Williams, Dartmouth . . . . .	560 0 0
Fellow, Dartmouth . . . . .	544 0 0
HENLEY & GHANT, Dartmouth (accepted) . . . . .	525 0 0
Architect's Estimate . . . . .	531 0 0
For Alterations to the Subscription Rooms, Dartmouth. Mr. E. H. BACK, Architect, Dartmouth.	
Veale . . . . .	£54 0 0
Oldrieve . . . . .	47 0 0
Henley . . . . .	39 10 0
Architect's Estimate . . . . .	45 0 0

### DUBLIN.

For Erection of Central Fire Brigade Station, Clarendon Market, Dublin.	
Collins Bros. . . . .	£3,700 0 0
CONNOLLY (accepted) . . . . .	3,600 0 0
Kelly & Son . . . . .	3,550 0 0
Monks . . . . .	3,500 0 0

### DURHAM.

For the Construction of about 1,165 lineal yards of 9-inch and 12-inch Pipe Sewers, Filtering Tanks, &c., at Durham. Mr. GEORGE GREGSON, Surveyor.	
Carrick, Durham . . . . .	£289 0 0
Stokoe, Newbottle . . . . .	288 15 1
Dixon, Fence Houses . . . . .	262 10 0
LANGTON & SEDGWICK, New Shildon (accepted) . . . . .	261 12 0
Surveyor's Estimate . . . . .	290 17 0

### ESTON.

For School Desks, &c., for Grangetown Board School, for the Eston School Board. Mr. W. H. BLESSLEY, Architect.	
Bullmer . . . . .	£400 0 0
W. & R. Blackett . . . . .	398 0 0
NORTH OF ENGLAND SCHOOL FURNISHING Co. (accepted) . . . . .	353 19 0
For Paving Footpaths.	
W. & R. BLACKETT (accepted) . . . . .	110 0 0
For Building Boundary Wall to Cemetery, Eston. Mr. D. RUSSELL, Architect. Quantities by the Architect.	
I. Atkinson . . . . .	£452 17 10
J. Atkinson . . . . .	450 0 0
The second tender is subject to a reduction for old material, for which no allowance is made in the first tender.	

### FRIZINGTON.

For Rebuilding Turret and Repairing Roof at Frizington Board School, for the Arlecdon and Weddicar School Board. Mr. J. B. WILSON, Surveyor.	
Green, Ullock . . . . .	£293 0 0
Pearson, Cleator Moor . . . . .	67 10 0
Barwis, Frizington . . . . .	62 0 0
Brokensha Brothers, Cleator Moor . . . . .	58 17 0
Spedding, Frizington . . . . .	53 10 0

### GORING.

For the Erection of a House at Goring, Oxon, for Mr. W. B. Hallett. Mr. W. RAVENSCROFT, 6 Market Place, Reading, Architect.	
HIGGS (accepted) . . . . .	£253 0 0

### GRAVESEND.

For Painting, &c., at Police Station, Gravesend. Mr. W. E. RHODES, Borough Surveyor.	
Bennett . . . . .	£56 0 0
Carpenter . . . . .	55 0 0
W. & E. Wallis . . . . .	54 0 0
Hollington . . . . .	52 18 0
Rackstraw . . . . .	49 18 0
Skegg . . . . .	39 10 0
Joel . . . . .	36 0 0
Wilder . . . . .	34 0 0
SEAGER (accepted) . . . . .	31 10 0

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For Building Stabling at the Angel Hotel, Guildford.	
Mitchell Bros., Stratford . . . . .	£340 0 0
Duvall, Godalming . . . . .	313 0 0
G. & R. Smith, Guildford . . . . .	300 0 0

### HASTINGS.

For Additions to Hastings Lodge, Old London Road, Hastings. Messrs. JEFFERY & SKILLER, Architects.	
Quantities by the Architects.	
Womersley, Hastings . . . . .	£4,750 0 0
Gates, Brighton . . . . .	4,665 0 0
Woods, Brighton . . . . .	4,650 0 0
Oakley, Tunbridge Wells . . . . .	4,650 0 0
Stubberfield, Ore . . . . .	4,393 0 0
Phillips Bros., Hastings . . . . .	4,396 0 0
Harman, Hastings . . . . .	4,300 0 0
Howell, Hastings . . . . .	4,290 0 0
Rodda, St. Leonards . . . . .	4,200 0 0
Peters, Weybridge . . . . .	4,075 0 0
Bull & Sons, Southampton . . . . .	3,983 0 0
Friedrich, Hastings . . . . .	3,981 0 0
Bridgland, St. Leonards . . . . .	3,927 0 0
Hughes, St. Leonards . . . . .	3,900 0 0
White, St. Leonards . . . . .	3,890 0 0
Vidler, St. Leonards . . . . .	3,720 0 0
Ditch, St. Leonards . . . . .	3,540 0 0
Small, St. Leonards . . . . .	3,377 0 0

### KENDAL.

For Building Stable, Remodelling Old Stables, &c., Castle Green, Kendal, for Mr. Wm. Bindloss. Mr. JOHN STALKER, Architect. Quantities by the Architect.	
J. & W. Brennan, Kendal, walling and masonry.	
Compton, Kendal, carpenter and joiner.	
Winder, Kendal, plumber.	
Jackson, Kendal, painter and glazier.	
Goulding, Kendal, slater.	
Cordingley & Sons, Bradford, cement concrete floor.	
Campbell Tile Co., Stoke-upon-Trent, patent tiles.	

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Butler . . . . .	99 19 9
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Foster & Dicksee . . . . .	3,333 0 0
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Richens & Mount . . . . .	3,112 0 0
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Howell & Son . . . . .	3,000 0 0
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Garrud . . . . .	2,831 10 0
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KING, Limited (accepted) . . . . . 274 0 0

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Brook, Guiseley . . . . . £235 0 0  
Barker, Idle, joiner . . . . . 98 0 0  
A. & S. Wheeler, Calverley, plasterer . . . . . 23 10 0  
Padgett, Idle, plumber and painter . . . . . 22 17 6  
T. & A. Thornton, Eccleshill, slater . . . . . 15 0 0  
Total . . . . . £394 7 6

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Foster & Barry, Nottingham . . . . . 11,400 0 0  
Hopkin, Nottingham . . . . . 11,300 0 0  
Knight, Loughborough . . . . . 11,275 0 0  
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Fletcher, Silverdale, carpenter and joiner.  
Walmsley, Carnforth, plumbing, painting, and glazing.  
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Coulthard, Workington, joiner . . . . . 109 19 0  
Young, Workington, plasterer . . . . . 45 0 0  
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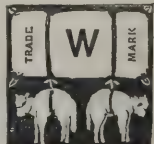
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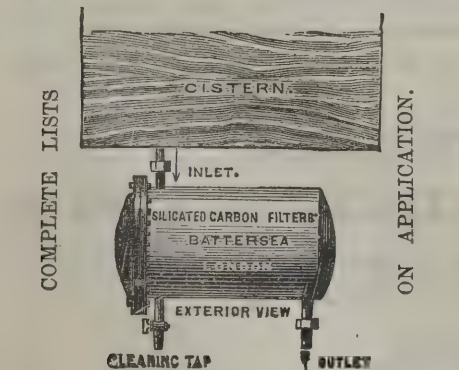
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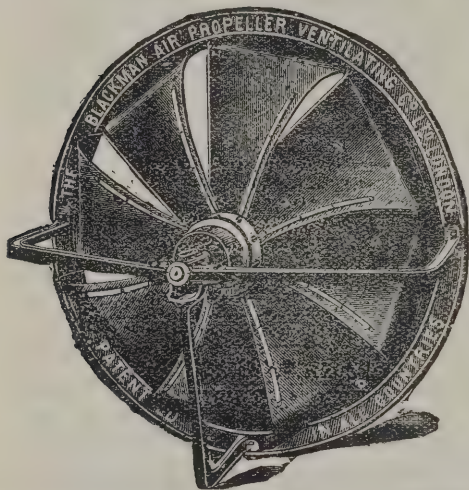
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# The Architect.

## ON THE SCIENCE OF BUILDING RISKS.



As a thoroughly practical and useful association of men of business, the Surveyors' Institution seems to be always notably recognisable; and the more so when contrasted with another similar society in which architects are interested, and which just at present is not fairly chargeable, perhaps, with a desire to be more than modestly ornamental. It is at the Surveyors' Institution, therefore, and not at the Institute of Architects, that we find Mr. T. M. RICKMAN, a member of

both Societies, reading a thoughtful paper upon the important question of the "risks" incidental to building contracts; and it is to an audience mainly composed of property agents and valuers that he makes an appeal on behalf of the common sense of the matter.

Mr. RICKMAN's mode of dealing with his subject is based upon a sound principle which we do not remember having come across before in the same form. The "risks" in question—that is to say, the more direct uncertainties or hazards connected with the building of a house as a commercial transaction—may in an ordinary way be regarded under two heads, namely, risks to builders, and risks to employers; but Mr. RICKMAN points at once to the self-evident fact that, when looked at more scientifically, both of these are hazards primarily belonging to the employer or proprietor alone, and that all "risks" which a contractor takes are so many of such hazards taken, whether for a proper consideration or not, from off the owner's shoulders. "Though these several risks," says Mr. RICKMAN, after setting them forth in order, "may be divided into two classes, they are originally all those of the employer; he engages an architect to minimise them for him" (a more commercial than æsthetic statement of the case); "some of them he can get rid of, others remain;" and then the object of the argument is to provoke attention to the claims of general fair play aided by specific accountanship, with a view to the relief of unwary contractors from speculative liabilities.

The builder's risks are set forth somewhat as follows:—The variations and uncertainties in the prime cost of materials and labour; the uncertainties of the foundation; the hazards as regards adjoining buildings; the chances of accident to person and property; the possible difficulties of obtaining payment; the penalties for delay; the chances of error in the estimates; and the doubtful operation of official control, amongst which our lecturer includes one very delicate source of "risk," delicately expressed, namely, "the idiosyncrasies of architects."

The "risks" which are still left to be borne by the owner are those which refer to extra cost; to delay by weather and by strikes; to the possible failure of the contractor; to structural defects; and to those shortcomings of the architect, which Mr. RICKMAN tenderly suggests are only to be apprehended in cases where that functionary is imperfectly acquainted with local peculiarities.

From this statement, made as it is by a quantity surveyor of well-known character and eminence, it may be gathered that it is not unusual for the architect and his quantity surveyor to saddle the contractor with a serious "risk" as regards the cost of making a sound foundation for the building. We may be excused, we hope, for doubting whether this can really be the fact; that is to say, whether any builder in his senses would submit to such a burden, or any respectable architect or surveyor attempt to impose it. Of another of the "risks" we may say the same, namely, that which pertains to the unavoidable damage of adjoining premises. Not only do we venture to assert that any architect who would propose by the artifice of "general clauses" to throw upon a contractor, selected by a competition of tenders, the responsibility for an indefinite amount of extra expense in foundations, or in the support and restoration of adjoining buildings, ought to be treated by the contractor to a bit of his mind; but we take leave to doubt whether any court of law in the kingdom would be found persuadable by even the most ingenious advocacy to act upon

a contract so palpably at variance with the first principles of all honest bargaining. We consider, therefore, that in the adjourned discussion of Mr. RICKMAN's paper, which is appointed for an early day, the author, if only as the representative of respectability in his own profession, would do well to declare explicitly that these two risks at any rate are disavowed by men of good faith.

The "risk" attaching to the possible insufficiency of the quantities called forth some very indignant animadversions upon the conduct of the Office of Public Works in respect of certain current advertisements for tenders, to be delivered upon bills of quantities officially supplied, but for the accuracy of which all responsibility is expressly repudiated. We must confess that we cannot quite sympathise with this particular complaint, which seems rather to distract the attention of true reformers. The case is peculiar and exceptional, almost *sui generis*, and logically dangerous. The employer is the Government, which is certainly entitled, before all other employers, to insist upon the technical impossibility of admitting elasticity into any of its contracts. It is to be presumed also that the bills are prepared by the very ablest experts, and of course without any sort of pressure. In the particular circumstances, therefore, the surveyors are surely not to be expected to interpose a personal guarantee between the high contracting parties; and who else is to do it? Even in ordinary building transactions, such a guarantee is well known to be practically almost impossible; and hence the agitation which has been going on for many years back in favour of constituting the bill of quantities the formal basis of the contract. This agitation, moreover, on its own ground, we cannot help frankly approving. Indeed, we consider that Mr. RICKMAN, unconsciously perhaps, but none the less forcibly, has shown that the practice of imposing "risks" of whatever nature upon a building contractor ought always to be confined within the narrowest possible limits.

In a word, the "risks" of building, as all experts will acknowledge, are quite sufficiently intelligible to admit of their being fairly discounted by a building proprietor (a totally inelastic "department" perhaps excepted), but they are not sufficiently ascertainable to admit of their being discounted by an ordinary building contractor; and hereby hangs a very important argument which we need not follow out, but the conclusion of which is the same that we have already stated, that the precise limits of the contract ought in all cases to be distinctly understood by means of all speculative "risks" being expressly excluded. Why should a builder—especially a lowest-tender contractor—take off my shoulders the incidental "risks" of my speculation? The very essence of my speculation is that I take all the expected profits; and I must surely set off against these the possibilities of unexpected loss. A gentleman spoke, in the debate on the paper before us, of "insurance" as the proper designation for the contractor's supposed appreciation of "risks;" and the phrase was caught at by some of his hearers as defining a principle apparently which is in some way equitable. But it was promptly pointed out by a following speaker that insurance can only be an act of combination, to equalise chance risks on the basis of mathematical average, which is quite a different thing from the act of thrusting upon an unwary contractor the responsibility for accidents beyond the reach of his foresight, and especially when his contract has been brought about by keen competition in price. There are instances in which, this process not being resorted to, the principles of contract are so far different. The contractor is allowed to discuss all "risks," and to appreciate them fairly; but what follows? The employer almost invariably objects to speculative items being included at speculative prices. "If he throws on the builder," says Mr. RICKMAN, "unreasonable risks (sporting items in the bill of quantities), he must pay heavily for getting rid of them." Instead of this, therefore, may we say that in too many cases he "engages an architect to minimise" such risks by putting general clauses into his specification, which a competitor by tender dare not appreciate fully, and must rely upon Providence to get him out of by hook or by crook?

What does worthy Mr. RICKMAN mean by "the idiosyncrasies of architects" as a source of risk? The long word which he here uses is manifestly a euphuism, a dainty phrase to indicate a little more than appears on the face of it; and the only thing we can suggest by way of explanation is the undeniable fact (we are sorry to say) that there are certain archi-



roots whose accepted duty seems chiefly to be to get their work sanctioned for at an inadequate price, and then to enforce its performance in a superior manner—the low price for their employers' sake and the better quality for their own. It is far from our wish to throw discredit upon the whole profession for the fault of a few of its members, and we are prepared to say that there are very many architects on the other hand who recognise both in principle and practice the great natural law of contracts, that unless the bargain be a fair one at the beginning it cannot be a satisfactory one at the end. Not only so, but we are inclined to lay quite as much blame upon quantity surveyors as upon architects for the introduction of "rinks" into contracts. It is generally said that a builder can take care of himself so exceedingly well that he needs no nursing, and so on; but a competition of tenders goes a long way beyond this. Let it be remembered that, as Mr. RICKMAN points out, *all risks* are primarily *builder's risks*, and this will put a very different complexion upon many of the liabilities which are too commonly expected to be accepted by a builder in a spirit of moral courage that can only lead to the substitution of loss for profit and bankruptcy for well-doing, to say nothing of a perpetual worry about extras, accumulated in self-defence *per jactant negotia*, instead of the honourable performance of an honest contract.

### BUCKFAST ABBEY.

By J. TOM BURGESS, F.S.A.

WANDERERS on the upper regions of the picturesque river Dart, far above the fortified heights of Totness, where BAYTUS and his Trojans are said to have landed in the fabulous ages, have come across, when on the eastern verge of Dartmoor, a few remains of an ancient religious house, which has been known under a variety of designations, as Bulliestra, Bughesta, Bussessewa, and Buckfast, by which name it is still known. It is in the hundred of Stanborough and the parish of Buckfastleigh, and is noted as being the site of one of the earliest monastic institutions in Devonshire, its "early history being lost in remote antiquity." It was doubtless owing to this that the council of the Society of Antiquaries at their last meeting made a grant in aid of the excavation begun on the site, with a view to ascertain the plan of the buildings, and to see if any remains of the more ancient monastery existed. What has been done hitherto was explained to the Fellows at the ordinary meeting of the Society on January 24, by Mr. F. WALTERS, architect, of 2 Queen Street, Westminster, with the aid of a series of plans, views, and photographs. Mr. WALTERS seemed to be unaware of the existence of a concise account of this ancient establishment, by Mr. J. B. ROWE, F.S.A., in his "*Cistercian Houses of Devon*," which was privately printed in 1879, and therefore his address lacked that human interest which should always attach to papers of antiquarian research. There seems to be no doubt that Buckfast was the seat of a fraternity of monks or religious ascetics long before the Conquest. The monks indeed pleaded in the reign of EDWARD I. that they held a certain manor called *Sol. Monasterium* by the gift of King CANUT, who appears to have been much interested in this portion of Wessex. At the time of the Domesday survey, Abbot AUCOKE and his monks were not only settled at Buckfast, which was the head of the abbey, but had considerable possessions in land and other property throughout the county. Whether the monastery was dissolved and its lands confiscated after the Conquest is a matter of dispute, for LELAND asserts that ETHELWARD, the son of WILLIAM POMEROY, was the first founder, and FOLT and FULTON assert that the Duke ALBERT erected a first abbey here for the Cistercians *before the Conquest*, which, as there were no Cistercians anywhere for more than thirty years after the Conquest, cannot be true. Indeed HENRY I. confirmed to the monks all their lands and tenements as they held them from "*ant. vet.*" and as HENRY died two years before the alleged grant from ETHELWARD, the latter, though he might have been a benefactor, cannot be called the founder. It seems clear that there was no dissolution of the abbey when it surrendered itself into the hands of St. EDWARD, with the mother house of Savigny. No foundation deed has been discovered, and we have no documentary evidence to show when it was re-edified. It was surrendered by GARNELL DOWNE, the abbot on

February 25, 1538. For this he was rewarded with the large pension of 120*l.* per annum, which he enjoyed with other emoluments for more than twenty years. The abbey church and buildings were shortly afterwards granted to Sir THOMAS DUNNIS, an ambitious knight, who seems to have pretended to be the friend of the monks whilst doing his utmost to profit by their disasters and misfortunes. There had been prior to this a charge of appropriating six tadders of lead from the priory, which he denies in a letter still extant in the Land Revenue Records. Amongst the subsequent possessors was the name of Sir RICHARD BAKER, the well-known author of the "*Chronicles*," beloved by Sir ROGER DE COVERLEY. In 1731 a view of the ruins was published by BUCK, which was exhibited at the Antiquaries, which shows a confused mass of gables and walls, without affording the slightest clue to the plan. In 1796 a Mr. LASKEY published in the *Gentleman's Magazine* an account of the ruins, which, though unsatisfactory from an architectural and archaeological point of view, is useful as a key to the ground plan which is now about to be unfolded. Mr. WALTERS read a portion of this in illustration of the plans.

Mr. LASKEY pointed out that there remained of this ruin, which he called "magnificent," two arches which appear to have been the entrance, and some ruins on a large scale which he took to be the lodge. The arches are situated one behind the other, and stand across the road leading from Buckfastleigh to Ashburton; the iron staples for gates to hang upon still remain, and are of great bigness, which led us to think they were of massy structure. The ruins of what we took to be the lodge stand on the eastern side, its length about twenty paces, breadth eight paces (not being supplied for a minute measurement we were obliged to content ourselves without thus roughly, taking care to diminish rather than exaggerate). On the same side are several apartments, one of which is inhabited, and another is converted into a pound-house, in which stands a moorstone trough of great bulk for the purpose of breaking apples for the pound. The following measurement I received from a learned gentleman who has paid great attention to these ruins. The diameter of this stone is 9 feet 4 inches, depth 3 feet 8 inches, one half of which is sunk in the ground. The supposed weight before it was hollowed he computes must amount to above 100 tons. It is of the granite kind, and affords matter of surprise by what means it was brought there, stones of that quality not being to be found within the distance of many miles, round the abbey being one continued lime rock, which is worked in many places a depth, height and extent surprising, and forming a vast cavern at once terrific and beautiful, which proves an inexhaustible fund of gain to the owner.

The remainder of these ruins are situated in an orchard on the western side of the road, at the bottom of which runs the river Dart, seemingly regretting the downfall of the abbey. The first thing that presents itself, tradition says was the abbot's cellar, which is entered by a small Gothic gateway, and is about twenty-eight paces long and twelve wide, arched overhead. At one end remain a few steps which lead to the ruin above, which our guide told us was the abbot's kitchen; it is now converted into a kitchen-garden. At the south end is the skeleton of a set of apartments, which appear to have been the cells of the monks, which was approached by winding steps, fifty one of which now remain. It is of particular form, having, as well as we could guess, seven sides. The immense bunches of ivy, dropping in rich festoons, almost buried its form. On removing some of these we could plainly observe the holes in which the joists and sleepers rested for support of the flooring from which we judged the rooms to be about six feet clear one above the other. These we were told solely belonged to the abbot. Joining this was their court of judicature and judgment-seat, and, behind, a dungeon for those that, by their offences, were thought worthy of the same. On the north-east side appear the walls and foundations of this once spacious and splendid seat of superstition; the abbey church and the remains of its tower all lying in such massy fragments that it is scarcely to be conceived by what power so vast a fabric could be disjoined. The walls appear to be of the thickness of nine or ten feet, and entirely composed of small stones in layers, and a compost of lime and sand, which we supposed to have been thrown on these layers hot, after the method anciently used in such large buildings, which incorporating together formed a mass as solid as the native rock. The ruins of the church appear to be about 150 feet in length, and



the ruins of the tower towards the south seem like huge vast rocks, piled on one another in extensive confusion—

By Time's fell hand defaced,  
The rich proud cost of outworn bury'd age.

Mr. LASKEY evidently thought that as stone for building was plentiful in the neighbourhood, the ruins would probably continue unmolested for ages; but time and man have falsified his prediction. In 1806 a house was built over a portion of the vaulted work. The so-called cellar and the seven-sided building still remain, the latter being what is now called the Abbot's Tower. Mr. ROWE was of opinion that it is a domestic building of some kind. It is square, of three storeys, with a cellar under, with fire-places, garderobes, and a well; there were staircases with landings on every floor. The entrance appears to have been on the south of the first floor.

This building was clearly shown on the plans exhibited by Mr. WALTERS, and, as Mr. MICKLETHWAITE suggested, was probably devoted to the guests of the abbey, of which there were three grades usually. One, those who received daily doles at the gate; another, who had inferior lodgings to those whom the abbot delighted to honour, and who had probably a prescriptive right to entertainment within the walls.

The plan of the church, as far as shown, differed from the usual plan of a Cistercian church in the length of the eastern limb of the cross, and in there being a thick double wall at the eastern end, with a T-like recess, to which no use could be assigned, though this feature is common in many ecclesiastical edifices in Ireland. At the south-western angle of the nave and south transept a heavy mass of masonry has been found, and at the first glance it appeared that this and the eastern end were the remains of the older foundation. The hypothesis of Mr. MICKLETHWAITE, that it was probably the foundation of the stairs leading to the conventual buildings, scarcely accounted for this unusual feature. There was another feature of singular interest. The nave was divided from the side aisles by the foundation of a solid wall, on which the piers of the arcade were built. This, though it has been observed before, is not common in the later Cistercian abbeys. Mr. MICKLETHWAITE pointed out that the nave was always divided from the aisles in the houses of the white monks; and in a celebrated Cistercian nunnery which still exists in Spain, the wall is carried up some three feet; but in England the division appears to have been of wood, as is evidenced by the remains at Fountains and other of the Yorkshire abbeys. The cellars mentioned were undoubtedly the cellarium—the *domus conversorum* of the late Mr. EDMUND SHARPE—which occupied the western side of the cloisters, and the dormitory of the numerous conversi was on the floor above.

Some portion of the grange remains, and the arches apparently of the entrance, but the gatehouse has gone. The cemetery appears to have been on the eastern side of the house built in 1806, as graves have been found on the lawn. The ruinous materials which Mr. LASKEY thought would remain as a monument for ever have been used to erect a mill, which occupies the site of some conventual buildings, for these monks were the pioneers of industrial occupation in the higher parts of the Dart, and their influence is yet seen in the woollen mills of this part of Devonshire. Portions of some tiles and two spoons found during the excavations were exhibited, and a vote of thanks to Mr. WALTERS closed the proceedings.

## ART FOR SCHOOLS.

IT indicates a vast change in our educational system when we find an Association formed for the purpose of securing the introduction of works of art into ordinary schools. There was a time when it was supposed that bare walls helped a boy or a girl to concentrate attention upon the teacher's lessons. A school having a claim to be considered historical had, according to the masters, associations enough about its stone and wood to satisfy the affections. Like Old BOWYER, they were ready to declare that the school was father, mother, sister, brother, first cousin, and second cousin to every one of the pupils, and woe be to the unhappy youth who refused to be convinced. In course of time the bleak walls were covered with diagrams relating to geography and mechanics, and so little satisfaction was derived from gazing on them by boys

or girls that even the most conservative of teachers could not object to their introduction.

This change from bare to adorned walls is, however, no more than was to be expected when old-fashioned and modern school books were compared. One of the differences between them is the abundance of illustrations in the latter. The old books were grim enough, and corresponded with the educational modes then in use. The pupil was supposed to be able to understand all the references to Greek and Latin arms, dress, houses, and every-day life without the aid of a woodcut, and to realise things which he had no opportunity of seeing from the scanty descriptions. Can it be said that the modern school books are less useful than those which were in use forty or fifty years ago? Some masters might be discovered who would say that a good author needs no pictures, but the majority of teachers would hardly care, even if it were possible, to restore the books with which they were made familiar in their own school days.

It will be said that the illustrations in school books are intended to serve as expositions of the text, and that they differ in character from the prints which are recommended by the Art for Schools Association. A master from a grammar-school or a Board-school would be sure to maintain that the majority of the examples shown in Bond Street are beyond him, and would be certainly beyond the understanding of most scholars. About engravings which represent *The Defeat of the Spanish Armada*, *The Princes in the Tower*, *A Distinguished Member of the Humane Society*, *Hauling the Line*, *Little Customers*, and *School Revisited*, there would be no difficulty. But what is to be thought of the photographs from Mr. BURNE JONES's and Mr. WATTS's symbolic pictures, of PINTURICCHIO's *Library at Siena*, BELLINI's *St. Jerome in his Study*, MEISTER STEPHEN's *Triptych*, and GHIRLANDAIO's *Zacharias*? There is no question of their interest; but, unhappily, it is not every adult who can sincerely admire them, and it may be supposed that they do not appeal more directly to the youthful mind. An incipient RUSKIN would probably be ready to worship them, but it remains to be ascertained whether ordinary boys could appreciate them. Unless it is a genuine admiration that is felt, the works had better be absent. Honest ignorance or indifference is better than an affectation of connoisseurship in young folks, and cricket seems a better topic for discussion than the merits of PIETRO PERUGINO.

The directors of the Association evidently believe that a copy from a work of art must exercise a beneficial influence on all who see it, and their faith in what the French call "la puissance de la Beauté" is certainly praiseworthy. They are making an experiment which, although it will seem labour in vain to the advocates of what is known as "a sound education," may lead to important results. Why should art (unless paid for as an extra) be excluded from the school curriculum? The answer would be that the tendency of education is now towards intellectual matters, because in the end they are more profitable. But this is taking a partial view of the scope of education, which should aim at the development of all the faculties, including imagination and the sense of beauty. In France, although a matter-of-fact spirit prevails among the authorities, and religious and other emblems have been removed from all the public schools, a sort of revolution has taken place in regard to the adornment of school-rooms. Artists of repute have received commissions from the public funds for pictures to be placed on the walls. It is remarkable that in the collection exhibited by the Art for Schools Association there is only one work which was specially designed for a school; and it comes from France, namely, the copy of M. DIDIER's fine frieze which was published in *The Architect*. A picture may be supposed to have some use in a school when the French Government are willing to pay the first animal painter in France for a representation on a large scale of scenes in country life in order to gratify the eyes of Paris boys. If the experiment of the Association succeeds, we may one day see the School Boards in this country following the French example.

As the Association has at present only a small room at its disposal to hold an exhibition the number of examples is necessarily limited, but we may assume that they represent the class of works which would be recommended by the committee for adoption in public and private schools. It is evident that, with few exceptions, everything relating to broil and battle has been on principle excluded from among the figure pieces. Indeed it may be said that with exception of Mr. MILLAIS's



*Princes in the Tower*, and *The Huguenot*, representations which are suggestive of pain are absent. The classes of works approved by the committee are limited to "pictures of simple natural objects, pictures of animals, pictures of peasant and artisan life, pictures of famous architectural works, landscapes and sea pieces, historical portraits, scenes from history, and reproductions of suitable subjects among the works of the great masters of English and foreign schools." There is ample room in these classes for a large variety of works, from copies of renowned pictures to sketches of flowers. But it would be well to discover whether the range might not be extended with advantage, and for this purpose the opinion of boys and girls should be considered. It may be safely asserted that boys would prefer engravings of MACLISE'S *Waterloo* and *Trafalgar* to those of TURNER'S, COROT'S, or LINNELL'S landscapes, and to the copies of most of the old masters. Whether their admiration of battle pieces is ill-advised and should be checked is a question for moralists to decide. Town boys would be attracted by pictures of country life, and the wisdom of the French authorities, in adopting M. DIDIER'S frieze for a Paris school, is unquestionable.

It may be assumed that the introduction of a series of works of art in an English school would at first give rise to more or less distraction, but after a time there would be desire for other works. In schools, as well as in nurseries, children must have something new if they are to be pleased. But there would be little difficulty in an interchange of engravings between the schools of the district. A series of groups which has been devised by the committee would, besides guiding authorities in their purchase, enable them, if they co-operated, to secure a variety sufficient for any change of subjects that might be necessary. It is astonishing how little a collection of suitable works would cost. Out of the thirty-nine groups in the Association there are only two which amount to five pounds each. For 2*l.* 15*s.* 6*d.* a school can acquire RAPHAEL'S *Belle Jardinière* and a study, two studies by LEONARDO DA VINCI, one by LUINI, HOLBEIN'S *Meyer Madonna*, and JULES DIDIER'S long frieze. For 4*l.* 5*s.* 4*d.*, in addition to the frieze, there would be Mr. MILLAIS'S *Huguenot*, GAINSBOROUGH'S *Blue Boy*, two examples by LUCA DELLA ROBBIA, and others by RAPHAEL, FRA ANGELICO, TURNER, and RICHTER. In some of the schemes the excellent toy-books of Mr. CALDECOTT and Mr. WALTER CRANE have been utilised with advantage. Opportunity is consequently given to benevolent people to do a permanent good to their young neighbours by a very small outlay, and the cheapest set of works would be an acquisition which any school might be proud to possess. It may also be remarked that many people who are about to purchase engravings for their own houses will find it an advantage to follow the selection of the Association, which does not include a single example of meretricious work.

### PARIS NOTES.

THE exhibition of drawings and sketches by masters of the present century will be opened at the Ecole des Beaux-Arts on Monday, the 4th inst. This exhibition, which is being organised under the auspices of the Society of French Artists, is to be entitled L'Exposition des Dessins du Siècle, and will thus form a sort of pendant to that of Les Portraits du Siècle, lately held in the same galleries. A committee consisting of the most eminent French artists has been entrusted with the task of choosing the exhibits from among the mass of drawings that have been sent in from every part of the country. It is expected that the principal masters of the first half of the century will be very largely represented.

An important improvement is about to be introduced in the French national museums. The director of Fine Arts has arranged for the publication of a popular catalogue, containing all the information necessary for the general public at a very low price; while another and more complete one, giving the fullest details respecting the origin and past history of the various works, with other information of interest to amateurs and critics, will be brought out at the same time. Several of the popular catalogues will, moreover, be placed on the tables in every room of the museum for the free use of visitors. An arrangement has also been made for the

reproduction, by means of photography, of 7,000 of the best paintings in France. Copies of these are to be sold at popular prices, and, after thirty years, the right of reproduction will lapse to the State.

M. Louis Leloir, the well-known artist, has died in Paris. Of late years he had devoted himself almost exclusively to water-colours, some of which have been reproduced in *The Architect*. He also executed a series of illustrations for the *édition de luxe* of Molière, lately published by M. Jouaust. For the thirty illustrations of the work he received 15,000 frs. (or 2*ol.* a-piece). Examples of the original drawings have appeared in *The Architect*. When an exhibition of his drawings was held last year, the publisher refused to part with the originals for a large price.

The death is also announced of M. Augustin Alexander Dumont, the sculptor. He was born in Paris on August 14, 1801, and was consequently in his eighty-fourth year. M. Dumont was elected to the Académie des Beaux-Arts in succession to Rosney, sen., and was named professor at the School of Fine Arts when that institution was reorganised at the end of 1863. The deceased was more illustrious through his pupils than by his own creations, for he may be said to have contributed greatly to forming the galaxy of brilliant artists that are now the glory of French sculpture. M. Dumont received the red ribbon of Knight of the Legion of Honour in 1836, was promoted Officer in 1855, and Commander in 1870.

The exhibition of Manet's works at the School of Fine Arts closed on Wednesday, when admission was free. The receipts have been far less than was expected, having averaged only 500 to 600 frs. per day. This is a poor result, especially when it be considered that the great majority of the works had to be framed expressly for this exhibition, at a total cost of nearly 20,000 frs.

The windows of the two upper storeys of the new Hôtel des Postes are now put in and glazed, so that the painters and decorators have been able to commence operations on this portion of the vast building. The authorities have given orders to push on the work with all possible speed, as it is intended to inaugurate the new Post Office on the occasion of the national fête on July 14. To this end electric-lighting apparatus is being put up, to enable the painters, &c., to continue working all night.

The organ *Les Petites Affiches* publishes the deed of sale by which the city of Paris effects the purchase of the property comprising the Arènes de Lutèce in the Rue de Navarre. The ground occupies 6,963 square mètres, and the sale price is 1,200,000 frs. The committee charged with the clearing of the Arena, and consisting of MM. Read, De Menorval, De Vogué, De Lasteyrie, Cernesson, Rey, Delaunay, and Dusseigneur, held a meeting last week, at which a report was read showing the progress already made in the work of excavation directed by M. Ruprich Robert. The stage and adjoining space have been cleared, the line of the *podium* (the surrounding wall of the arena) discovered, as well as many remarkable sculptures and numerous skeletons, and temporary sheds erected to afford shelter from the weather. About 3,000 cubic mètres of earth have been taken out up to the present time.

The heavy work on the Hôtel de Ville being now completely finished, it has become possible to count the exact cost of the new municipal palace. The masonry work, properly so called, is found to come to a total of 12,092,002 frs. In this amount is included a sum of 300,000 frs. allowed to the contractor as an indemnification for losses occasioned by circumstances beyond his control. Thus 10,185 frs. is counted for delays caused in the transport of material by the interruption of the canal navigation in 1879, and 64,000 frs. for losses arising from the severe and long-continued frost in the winter of the same year. It is calculated that altogether a further outlay of five or six million francs will be requisite to complete the sculptures and internal decoration of the building.

Important works of repair have lately been commenced at the Château and Park of Versailles. A long period of neglect has allowed the reservoirs, pipes, and other apparatus for supplying the grand fountains to fall into such a state of dilapidation that the whole system for some time past has shown signs of breaking



down, and the authorities have at last been absolutely forced to take the matter in hand. The heaviest work to be done is in connection with the Neptune Basin, and, as it can only be taken in hand by sections of a quarter at a time, it will scarcely be finished before the end of 1887. Thus the numerous foreign and Parisian visitors that flock to Versailles to see the *grandes eaux* whenever they are announced to play, cannot expect to again see them in all their completeness for upwards of four years to come. The repairs on the Dragon Basin—known also as the *Bassin de la Victoire*—and the Pyramid Fountain are being carried out with all speed, so as to render it possible during the coming summer to give a display in some way worthy of the traditional renown of the Versailles fountains, and these will probably be out of hand by the beginning of May. In connection with the Dragon Basin, the marble flight of steps in the northern garden is being thoroughly restored, and after this part of the work is completed, the Obelisque, or Hundred-pipe Basin (*Bassin des cent-tuyaux*), will be undertaken. In the château itself, the marble court is being relieved of all the excrescences that have been crowded into it in the course of years, and restored to its original condition. In this court “*Alceste*,” the opera of Lulli and Quinault, was played for the first time in 1674, and 115 years later Marie Antoinette was obliged, in obedience to the desire, or rather the imperious clamour, of the people, to show herself unattended on the first-floor balcony.

### THE CONSERVATION OF PICTURES BY SIR JOSHUA REYNOLDS.

THE following interesting letter has been contributed by Mr. J. C. Robinson on the present state of Reynolds’ portraits:—

Among the admirable Sir Joshuas at the Grosvenor Gallery, the well-known full-length portrait of *Mrs. Pelham Feeding Chickens* has been greatly commented upon in art circles and in the press as a disastrous example of picture-cleaning vandalism. The picture certainly has been thoroughly cleaned. Whether the state of the work really necessitated that operation I know not; but, assuming that it did, I do not think the operator, whoever he was, has been guilty of so great an enormity as is generally supposed. Though wofully transfigured, and that, of necessity, for a long time to come, the picture in question has, I think, suffered no permanent—i.e., irretrievable—injury. This, however, is more than can be said of several other works in the exhibition. If I may be allowed a brief space in the *Times*, I think I can render some much needed service to the possessors and lovers of pictures by Sir Joshua Reynolds in offering information as to the causes of detriment and suggestions for their better preservation of such works in future. I think it may be assumed that in the whole range of pictorial productions, ancient and modern, there are no works which, for their safe keeping, involve more difficult problems than those of Sir Joshua Reynolds. This arises from very obvious causes. In the first place much of the onus attaches to the painter himself. Sir Joshua’s works from the beginning were, as a rule, endowed, so to speak, with frail and delicate constitutions. His practice was of the most uncertain and unsettled nature; one continual course, in fact, of casual experiment unguided by the light of science, and directed solely to the attainment of immediate results, without any thought for the duration of his works. As a natural consequence, they afford typical examples of almost every ailment, almost every form of inherent tendency to decay, to which pictures are liable. A considerable proportion of them, indeed, must have begun to die, as it were, from the moment they left his easel.

Then, again, Sir Joshua Reynolds’s works were produced, and have ever since remained in a country which of all others has a climate the most unpropitious and unsuitable for the preservation of art, and where, moreover, the modes of housing and living with these treasures have been additionally inimical to their well keeping. Lastly, perhaps in no country has there prevailed greater ignorance and recklessness among the people who have had to do with pictures—that is, as picture-doctors; in other words, cleaners and restorers.

There is nothing like seeing with one’s own eyes, and the present exhibition offers a unique opportunity for the observation and study of the state of Sir Joshua’s pictures, as they have come down to us after the chances and changes of a century or more. I purpose, then, to “improve the occasion” by directing attention to particular works now before the public. Let us, then, begin with this *Mrs. Pelham* portrait, No. 9, painted in 1770, and at the same time associate with it No. 125—a similar whole-length portrait of *Lady Stanhope*, produced a few years earlier (1765–66). The present aspect of these two pictures is literally as different as light is from dark. The former, a recently-cleaned picture, now

presents a raw spotty aspect, entirely destitute of that transparent golden glow which overspreads so many of the beautiful works around it; but No. 125, on the other hand, is enveloped in Cimmerian darkness. Only with difficulty can the leading details of the composition be discerned through the dense brown envelope which enshrouds it as in a London fog. Nevertheless, this picture was originally scarcely less lightsome and brilliant than the *Mrs. Pelham*, and if it could be skilfully cleaned it is possible that it might yet be brought back again almost to its pristine state. It must be clearly understood, then, that the amazing alteration which has taken place is almost entirely due to the darkening of dense coats of varnish which have from time to time been superimposed upon the picture. But the majority of Sir Joshua’s productions are more or less afflicted by an inward malady, more serious even than this plague of superadded darkness; and when the two evils are combined in full measure in the same work the case is usually hopeless. The malady in question is in its nature incurable and progressive. All that can be done is to try to keep it within bounds. Everybody will have noticed that the dark pigments, mainly in the backgrounds, draperies, &c., of Sir Joshua’s pictures, are painted in an unusually thick, full, “impasted” manner, and that these passages are often strangely cracked and corrugated, and nearly always dull and sombre. Often when the faces, hands, and other more lightsome parts of his portraits are in excellent preservation, the hair, dark backgrounds, and other low-toned passages have become disfigured by a network of wide-yawning crevices, or rippled, wrinkled foldings, which, by reflecting the light from the unequal surfaces, produces a disturbing effect, destructive of the proper “keeping” or harmony of the work.

For these drawbacks the painter himself is mainly responsible; they have arisen from the use of unsuitable colours and vehicles. The basis of the rich and splendid brown tints which, from emulation of Titian and Rembrandt, had such a fascination for Sir Joshua, is asphaltum or bitumen, and the medium with which it was combined most frequently an incongruous mixture of linseed oil varnish, and wax; but the pigment thus composed, and the endless admixtures of it with other colours seen in Sir Joshua’s pictures, are all more or less changeable and otherwise obnoxious.

The evil properties of this pigment when applied, as it often was by Sir Joshua, pure and simple and in great “body” are these. In the first place, it never becomes really dry and hard like other oil colours; then, as it partially dries on the surface, it contracts rapidly in bulk, whereby ensues the shrivelled, corrugated condition. After a certain time these corrugated portions, especially when overlaid with other vehicles, develop into cracks, constantly opening wider and wider, and, lastly, in time the pigment loses its original depth of tint and transparency and becomes opaque, “horny,” and black. In short, the obnoxious changes have no limit, and endless new developments may occur as varying external influences act and react upon it.

Nor is this by any means the only special cause of deterioration with which Sir Joshua’s works are afflicted; but to follow out this particular thread would involve a complete technical treatise. Let us now again consider the outward applications for which the successive curators of Sir Joshua’s pictures, rather than the painter himself, are responsible.

In Sir Joshua Reynolds’s time, but more particularly during the early part of this century, very peculiar notions prevailed as to the proper presentable aspect of oil pictures. The “old masters” were then all in all, and dark pictures and rich, low golden tones were exclusively admired. One of the great arbiters of taste of that time, Sir George Beaumont, even laid down the absurd dictum that a perfect picture should have the dark golden-brown hue of the back of an old fiddle. In response to this requirement pictures were often defaced with artificial tonings or coloured washes of the most heterogeneous nature, and with varnishes tinted with colouring substances. All this was, of course, utterly short-sighted and wrong.

It is undoubtedly quite necessary that the surface of pictures should be protected with varnish, for patent reasons of which I shall say something hereafter; but this protecting varnish should be transparent and colourless, and, above all, of such a nature as to admit of being removed, if necessary, without any risk of injury to the delicate surface of the work beneath. Now it may once for all be stated, and the fact should be fully borne in mind and understood by all who have to do with pictures, that there is only one kind of varnish known which properly fulfils these requirements—pure mastic; and it is scarcely too much to say that no other substance of any kind ought ever to be applied as a protection to pictures. I think this fact is now generally acquiesced in by all really intelligent picture-restorers; but, unfortunately, in past times an infinity of deleterious mixtures was recklessly employed, and a *damnosa hereditas* of infinite complexity has been thereby entailed upon us.

Probably, mainly in response to this unreasoning predilection for dark-toned pictures, a practice arose of the employment of a kind of varnish which, although transparent and colourless when first applied, was known to have the property of speedily acquiring a deep golden-brown tone by inherent chemical change—in reality progressive discolouration, to which there is no limit but utter



darkness. Nor was this the only objectionable quality of this varnish; worst of all is the fact that this substance becomes in process of time so hard and obdurate that it is a most difficult and dangerous task, often an impossibility, to effect its successful removal. Yet, alas! the great majority of Sir Joshua Reynolds's pictures have been eclipsed by this fatal envelope.

This medium is what is known as oil varnish—that is, mastic mixed in varying proportions with boiled linseed oil. Now this vehicle is practically identical with that used by the painter in the execution of his work, and when applied to the naked surface of a picture it adheres firmly and speedily becomes part and parcel of and homogeneous with it. In such cases any attempt to remove this varnish when discoloured must inevitably result in bringing along with it more or less of the delicate surface work of the picture—in other words, those final touchings and glazings which are often its chief grace and glory. I fear these technical notes will have been found somewhat tedious; they are, however, essential to the elucidation of the subject, and how important this question really is will be obvious when it is considered that hundreds and thousands of fine pictures are daily and hourly perishing from easily preventable causes. In the reign of ignorance which now prevails, indeed, the reckless hands of some crass mechanic or the foolish fancies of an ill-informed or crochety owner may at any time, in a few brief minutes even, deprive the world of the noblest masterpieces of a Titian or a Raphael, a Rembrandt or a Reynolds.

### LANCASHIRE ARTISTS.

A PAPER was read by Mr. J. H. Nodal at a meeting of the Manchester Literary Club on Monday. It referred to a list containing the names of seventy-six deceased Lancashire artists. Of these thirty-one were natives of Manchester, twenty-four of Liverpool, four of Preston, three of Bolton, three of Warrington, two of Dalton-in-Furness, two of Lancaster, and one each Bury, Prescott, and Urswick, near Ulverston. Three others are set down as born at Glossop, but they lived in Manchester, and two of them were baptised in that town. Again, of the seventy-six names, sixty-six were painters, three architects, three engravers, two sculptors, and two women painters.

The earliest of the Lancashire artists appears to have been Hamlet Winstanley, who was born in Warrington in 1696, and died there in 1756. He studied in London under Sir Godfrey Kneller, and also for a little while in Italy, and appears to have spent the greater portion of his working life in painting for the Earl of Derby at Knowsley. Many of his productions—family portraits and views of the neighbourhood—are in the Knowsley collection; and he executed twenty etchings from the works of the old masters in that collection. Horace Walpole entered him in his "Anecdotes of Painters" as an engraver only, and Redgrave copied the error into his "Dictionary of Painters," and it is due to Mr. George Scharf, the secretary of the National Gallery, that the mistake has been rectified in our own time. Mr. Scharf speaks of Winstanley's etchings as "remarkably spirited," and they justify Walpole in classifying him among engravers, but not for the exclusive classification, for, says Mr. Scharf, "Winstanley's sketches of Rome and studies of antique figures are very masterly." Standing first in point of time, almost alone, in the annals of Lancashire art, Hamlet Winstanley is connected with the later records in consequence of his tutorship of George Stubbs, who was born in Liverpool in 1724, and rose to be an associate of the Royal Academy in 1780, and a full Academician in 1781. Through some informality his appointment as an Academician was never ratified, and he accordingly always appears in the notices as an associate only. He, however, always claimed the dignity, and insisted upon it. Few painters have had less justice done to them, and it is only of very recent years that his great merits have been conceded. The Lancashire painters who have succeeded in entering the portals of the Royal Academy are only four in number, namely:—George Stubbs, Associate; George Romney, R.A.; Joseph Farrington, R.A., Frank Stone, A.R.A. The following living men may be added:—Richard Ansdell, R.A., Thomas Oldham Barlow, R.A., Luke Fieldes, A.R.A., Alfred Waterhouse, A.R.A., Henry Woods, A.R.A. Until the beginning of the present century the number of native artists was extremely small. Most of these migrated to London and remained there. In 1773 the first public effort for the encouragement of art was made in the county by the formation of "the Society for Promoting the Arts in Liverpool," with Mr. Blundell, of Ince, as president, and Roscoe, the historian, as vice-president. It held one exhibition, and then its further progress was stayed by the American and French wars, which half ruined Liverpool, until 1783. Then there was a brief revival, one exhibition being held in that year, and another in 1787. War again intervened. The Society of Artists disappeared; and it was reserved for a much later period in the present century to re-establish the exhibitions in Liverpool. In Manchester such exhibitions date from the opening of the Manchester Royal Institution in 1830. For the first forty years of the century Lancashire furnished a poor and precarious market for the work of the painter, and indeed an artist was com-

pelled to depend for his livelihood either upon the painting of portraits or the teaching of drawing. Men like Bradley, Faulkner, Liverseege, and Towne, though they maintained their connection with their native shire, found it necessary to move to London and spend most of their time there. As a consequence of this state of artistic affairs it will be found that the lives of those artists of whom we have any adequate record, with the exception of Romney and one or two others, were lives of considerable hardship, anxiety, and small pecuniary success. It is interesting to note that two of our Lancashire artists—Joseph Farrington, R.A., and William Green—were among the first to disclose the beauties of the Lake country by means of lithographic or engraved views from their drawings. Farrington's twenty views appeared in 1789; they were more than doubled in number in subsequent editions, and were frequently re-issued. William Green's series of sixty views, "illustrative of the most beautiful scenery in the Lake district," were issued from Ambleside in 1814. "A Guide to the Lakes, Mountains, and Scenery," in two vols., was published in Kendal in 1819, with a large number of sketches, and the Rev. Richard Loxham, writing in the "Manchester School Register," vol. 3, describes it as "still by far the best and most minute guide to the lakes, mountains, and scenery."

Mr. Nodal further stated that the list and the materials for the biographical dictionary of Lancashire artists had been collected in consequence of the initiative of the club, and the manner in which it was to be utilised still remained to be decided. After some conversation it was agreed to recommend to the council to issue a hand-list of deceased Lancashire artists, and to circulate it in order to obtain additions and corrections with a view to publication at a future date.

### LYCIAN ART.

THE fourth of Professor Newton's lectures at University College, on Lycian Art, treated of the rock tombs. Of these tombs there were, he said, three principal classes, *heröa*, with Ionic façades cut in the face of the rock; tombs which seemed copied from a wooden structure resembling a block-house with a flat roof: and tombs copied from a wooden structure, and surmounted by a roof in the form of a Gothic arch. The tombs resembling a block-house with a flat roof were those which Fellowes in his "Lycia" calls Elizabethan, because their façades cut in the rock resemble the square-headed windows, with mullions of Elizabethan architecture. The tombs with arched roofs were, so far as the lecturer knew, peculiar to Lycia. The structure of the roof was evidently copied with literal accuracy from a wooden original. On each side projected two boldly-carved lions' heads, in each gable panels were let in, on the apex of the roof was a vertical ridge, either end of which had been ornamented with a bull's head. Two examples of this type of tomb might be seen in the Lycian Room in the British Museum, one on either side of the passage leading to the reading room. Both were ornamented with sculptures in relief, and had inscriptions in the Lycian character. On one of these tombs was a name which had been read *Paiafa*, and which, it was thought, was the name of the personage to whom the tomb was dedicated. On the four sides of the lower part of this tomb were the following sculptures in relief. On the south side was a satrap seated in a chair ornamented with lion's feet. In front of him stood three male figures, and behind him another figure, thought to be female. On the north a mounted warrior, followed by three horsemen, attacked three warriors on foot armed with spears. Behind them a fourth, issuing from behind a rock, raised his hand as if encouraging the others. A wounded figure lay prostrate under the mounted warrior's feet. This scene seemed to represent an attack by ambuscade. At the west end was a bearded figure raising his hand to the head of a naked youth, as if crowning him. The youth might be a successful athlete being crowned after his victory. At the east end were two bearded warriors wearing cuirasses, one of whom raised his hand over the head of the other. There were the decorations of the part of the tomb which might be considered as the sarcophagus itself. On the roof were the following representations:—At the west end, in the panels within the gable, were a pair of sphinxes, and beneath, in very low relief, was a group of a veiled female, to whose side a naked boy clung, looking towards a bearded man holding a sceptre. In the east front within the gable, were a pair of sphinxes, and below a group too indistinct to be made out. On the arched roof on either side was a chariot group. A youthful figure drives four horses attached to a chariot, into which a bearded warrior was stepping. On the ridge which crowned the apex was, on the north side, a relief representing a battle, in which five combatants on foot fly before a mounted warrior, on the right, who was followed by another mounted warrior, attacking a foe fallen on his knees. The lecturer regretted that in consequence of the wholly inadequate space in which this tomb was exhibited, the sculptures of the roof were very imperfectly seen on one side, and wholly invisible on the other. He was sorry to say that he must refer any person who wished to see those sculptures to the Museum of Casts at Berlin, where they



might be studied under light denied to the originals, and he took this occasion to animadvert on the niggardly allowance of space meted out to the sculptures in the British Museum, when compared with the ample galleries of the Louvre; the museums at Berlin and Rome, and those of other much poorer countries abroad, when they acquired fine sculptures, did not stow them away in sheds and cellars, but housed them in a manner worthy of such precious remains. Returning to the description of the tomb of Paiafa, the lecturer said that the inscription on it as interpreted by Savelsburg, did not very satisfactorily explain the subjects of the various reliefs, but they probably represented various scenes in the life of Paiafa, his exploits in war, his recreations in peace. Some of the figures might be his ancestors, whom the Greeks supposed to be always present with them. With regard to the peculiar type of these tombs, with arched roofs, the suggestion of Semper, in his "Tektonik," was well worthy of consideration. He thought that the original wooden structure from which they were copied, was a coffin with a high roof, like a catafalque, the panels of which were ornamented with paintings and hangings, as was the case with the funeral car of Alexander the Great. He was glad to find that Professor Hayter Lewis was disposed to agree with this suggestion.

## BUILDING RISKS AND THEIR INCIDENCE.\*

BY T. M. RICKMAN.

ALL building works involve risks—risks to builders, risks to employers. The risks usually considered to attach to builders are:—Changes in price of labour, enforced at times by strikes; alteration in the efficiency of labour; changes in price of materials; the difficulties arising from having to obtain special materials in place of those usually procurable; the state of the bottom obtainable for building, and the consequent extent of the foundations of the proposed structure; the use of materials from the estate, such as bricks, stone, timber, and the value of them for the purpose of the erection; the state of the adjoining premises as affected by the proposed works, and the condition and value of the old materials which may have to be reused; risk of irregularity of payments, and the failure of the employer; penalty as to time of completion; risk of accident to the public and to workmen employed; the idiosyncrasies of architects, as shown in their explanations of their own terms; the unexpected views of the intentions of the legislature by the administrators of Acts of Parliament; the whims of clerks of works; the danger of inaccuracies in the estimates.

The risks usually considered to attach to employers are:—Excess in cost over the contemplated expenditure; delay in completion beyond the anticipated period, occasioned by strikes, tempest, frost, or other inclement weather, and other causes, and the possible want of occupation for the building in consequence of such delay, involving sometimes the loss of anticipated business; delays and difficulties from the failure of the builder; defects in workmanship and material, after all precautions taken; in case of the employment of an architect strange to the locality, his non-acquaintance with local customs and materials.

Though these several risks may be divided into two classes, they are originally all those of the employer; he engages an architect to minimise them for him. Some of them he can get rid of, others remain. If he throws on the builder unreasonable risks (*sporting* items in the bill of quantities), he must pay heavily for getting rid of them. There are cases in which risks can be transmitted, and others where they must be retained. Whoever draws up a reasonable contract will not endeavour to throw unreasonable risks on to the builder. The experience of builders varies as to what they will undertake as risks, and difficulties are sure to ensue if builders undertake risks with the bearing of which they are unacquainted.

Before considering the relative advantages of different modes of contracting, some observations are here offered on the mode of dealing with the several risks above mentioned.

The risks as to variations in prices and efficiency of ordinary labour and materials should lie with the builder.

The employment of "other tradesmen," specially named by the employer or architect, for portions of the work, introduces fresh difficulties for builders, and makes it almost impossible to carry out the works by the intended date of completion, as such tradesmen are not usually bound to time in the same manner as the general contractor, and the latter has not usually the power of making a free contract with them.

The extent of foundation required is usually a risk retained by the employer. It is often possible to obtain extra accommodation from additional foundations which is to the employer's advantage. It is sometimes almost impossible to execute works in foundations which, in the first instance, it seemed reasonable to propose.

The works to adjoining premises, including party-walls, are invariably attended with risks which generally should be retained,

but must sometimes be transferred. The liability occasionally arising to rebuild, instead of repairing, a party-wall, and the expenses in consequence, including that of removal to the adjoining owners, may be so greatly varied in execution, that the possibility of transferring the risk to the builder by any usual clause is more than doubtful.

The amount of the penalty inserted in a contract for delay in the completion of the works should be based on some equitable principle, and should be commensurate with the loss from non-occupation. This may be calculated, as interest on money expended, in some cases on buildings only, in others on buildings and site, and there are cases where the value of expected trade may be introduced; but, in the latter case, it would seem reasonable that it be mentioned in the contract.

The time allowed for additional works should be allowed in case of variations, on the whole amount altered or reconsidered, and cannot practically be calculated on the value of net extra cost alone.

The present increased actual value of land, and the increased proportion which the value of the site now bears to the total cost of town buildings of which it forms a part (and which value has to be considered in many instances in calculating the amount of penalty), has led to haste in the conduct of the work, to throwing points of detail over until the time comes for their execution, and to the drawings and specification being incomplete and really insufficient either for estimating or for carrying out the works.

Such being risks attendant on the erection of most buildings, there are cases in which employers increase their risks by the course of their proceedings. A public body erecting a building of a new sort increases the risks by introducing the element of an architectural competition for the design, and by stating a fixed sum as the principal guiding element in the conduct of the works.

Another case is that where there is a contract for an entire work, with the rates applicable by special clauses to future variations, and where risk of complication is introduced by every separate private bargain made in the course of the works either by the architect or by the employer with the builder. Such agreements are most difficult to interpret, and, even if clearly defined, introduce two separate systems of settling a value for the same work.

Another element of risk is introduced by changes in the plan or in the class of work to be used, made after the receipt of the tenders and before the contract is signed; such changes, if considerable, complicate the accounts and are most difficult of statement in revising the drawings and specification. Reasonable care may make quantities and specification hang together if written continuously, but it is to be doubted if it is possible so to alter a specification for a large and complicated building, which has been accurate at first, as that it shall be correct after considerable variations have been introduced.

And here may be considered that element of professional responsibility which is so generally introduced in the conduct of works, and which should result in the proper distribution of risks between the employer, the architect, the surveyor, and the builder.

An employer building on his own estate employs his own men and materials. If erecting a new building, he takes all risks himself, and those risks are the least possible in quantity. If altering an old building, the risks are greater, the uncertainty as to time to be occupied by the works is increased, the cost of the works is greater, and the difficulty of sub-letting portions or trades, if the proprietor is disposed to do so, is increased.

If a building is erected in a town, there are the further risks of dealing with adjoining properties and with public authorities. These require special knowledge, and builders are to be found who will take these risks as an ordinary business, and also the responsibility of the working up the whole into a complete house or building, such responsibility being expressed by the laws relating to contract for the production of a complete chattel.

If the employer requires special architectural design, an architect is employed, who is the agent of the employer, and is responsible to bring larger knowledge of dealing with risks to bear on each subject than either the employer or the builder may possess. In arranging a contract under such circumstances, the cost of materials and labour is to be supposed to some extent to be known by all parties, and a profit is added to cover the risks which cannot be particularised, and for the reward of the builder.

Employers, and with reason, generally doubt the expediency of placing a contract in the hands of a builder without competition, hence the system of tendering; and, were the specification always clear, and no sporting risks introduced, each builder tendering would prepare his own estimate; but the multiplication of these more difficult risks, and the want of exactness in defining them, are some of the reasons for the introduction of an intermediate person who himself takes the risk of the quantities, and furnishes them, as far as they can be accurately measured, and whose business it is to point out the nature of all sporting risks which may be contingent on the contract.

It is very difficult to define some of these risks, as it is difficult to define the modes of construction intended to be adopted, and when severe competition is introduced it becomes at some time a

\* A paper read at the ordinary general meeting of the Surveyors' Institution, January 28, 1884.



question what is to be considered the contract with reference to such matters. What the architect intended to express may not be the fair meaning of the words he used, and so his intention may not be the explanation of the contract.

Upon the fair rendering in the quantities of the terms stated by the architect depends, most likely, whether or no the builders tendering take sufficient pains to ascertain beforehand what these risks are.

If all of the risks are not stated in the specification, except under general headings, if all of them are not ascertained by the measuring-surveyor in preparing the quantities, it would seem questionable whether the builder who contracts for the work is responsible for such risks so omitted, and, if not, it would seem that they are still on the shoulders of the building-owner.

Reviewing the history of the course of business, we find—1st. The architect employed by the building-owner, employing workmen; all risks being at the cost of employer. 2nd. The architect and builder combined, with or without contract, the employer, by selection of an architect, devolving on him, as he might think, all risks, but in that probably mistaken. 3rd. The employment of an architect, and under him of contractors for separate trades or of a builder for all trades. Both parties recognised by the employer, with larger chance that all the risks should be transferred from the employer, but with a probability that some of them may reach him after all. 4th. The introduction of a quantity-taker either unrecognised by the architect or employer; or recognised by the architect, not by the employer; or recognised by the employer; or appointed by the employer: with a further complication in the three last cases, not unfrequently introduced, by the fact of the architect being the quantity-taker.

In each of the above-mentioned cases, more or less of the risks are become the responsibilities of the several parties engaged by the building owner; but if any one of them, architect, quantity taker, or builder, have not done their duty in preparing the contract and the estimate therefrom, and, as is also possible, if the employer has not assisted as he ought, such neglected work may make a sore place in settling up the accounts, and the employer may find himself still involved in risks which he thought to have transferred.

A knowledge of the relative positions occupied by these several parties is gradually reaching the class of persons who are likely to build; there are many among them who are desirous of shirking their true position, but those who have had experience—or who have, still more fortunately, obtained their experience from others—are becoming aware that the nominal shifting of all responsibility from off the shoulders of the employer on the subject of open questions or undefinable risks, is not a course which will secure for him the execution of the work for a fixed sum, without chance of excess or further trouble; nor does it secure the entire avoidance of questions which may have to be referred.

We are now more in a position to consider the relative advantages of different modes of contracting, and the employment therein of the various professional persons usually engaged, with the extent of devolution of risks accompanying each. Those to which attention is here called are as follows:—(A) Day-work prices for labour and materials. (B) A fixed sum for the whole, obtained from the builder, without the intervention of a surveyor. (C) A fixed sum for the whole, obtained by quantities furnished, priced, or unpriced, by a surveyor. (D) Measure and value on a schedule. The schedule priced by builder on tender. The schedule priced by surveyor, and tendered at a percentage on or off. (E) An agreed percentage on prime cost.

The principal point to which attention is called is the question as to which of the above courses distributes the risks before mentioned most equitably.

(A) *The employment of a contractor who charges by day-work for labour and materials at agreed prices, or at current rates.*

The risks of alteration in price of labour, and, to some extent, in the efficiency of labour, and the risk of alteration in the price of materials, are in this case on the builder, and, if payments are regular, all other risks remain on the employer. There are many cases in which the changes possible in cost of labour and materials are the most important risks, and the only ones which can be taken off the employer's hands. Many large accounts for repairs must be thus treated, and the accounts for works are so treated at times when the employer and builder are equally acquainted with construction, and when the employer is his own clerk of works.

(B) *A fixed sum for the whole, obtained direct from the builder.*

All the risks which I have given as the builder's are supposed to be transferred to him under this arrangement, but the extent of the employer's risks will depend upon the carefulness with which the specification has been drawn, which means a sufficient examination into the various questions by the employer or his architect beforehand. In default of this sufficient examination, the following risks will practically remain on the employer:—

Foundations; adjoining premises; some public requirements, and the difficulty of obtaining special materials, besides others which, if not fully considered, may become the subject of a reference.

The employer's risks which this course is intended to pass on to the builder are—excess in cost, delay in completion, and class of workmanship. The extent to which this is really effected depends again on the specification and sufficient preliminary inquiries—in fact, on the reasonableness of the specification.

Special attention has been called to the necessity of preliminary investigation, because on it depends practically the extent of contingencies which have to be provided for. A builder may insert a sum for all such things as he has not taken the trouble to measure or inquire into, but that is not business, and it is a course which a measuring-surveyor cannot adopt. The object of competition is to avoid the existence of such an item, and to obtain, at lowest market price, a specified combination of recognised marketable materials. Engineers and architects preparing their own quantities may insert a provisional item of 10 per cent. to cover their carelessness; but the result of such an item must be, if disputed, to throw the whole contract open to a careful remeasurement.

(C) *A fixed sum for the whole, obtained from quantities furnished by a measuring-surveyor.*

It is not intended here to discuss the various positions occasionally taken by the measuring-surveyor, and the variations in extent of the authority which consequently attaches to his quantities. Whether he is a builder's clerk, a builder who has relinquished his original business, an architect's clerk, an architect who has relinquished, or is prepared to relinquish, his original business, or a trained assistant to an expert; any of these may be his origin. His appointment may come from some only of the builders, from all the builders, with or without touting, from the architect, from the client. There are risks that he may do injustice to the builder, to the architect, to the client. His fees may be allowed fairly, including or not including responsibility for errors; they may be inserted at a very high rate, and the architect may mulct him in various ways; or the client may cut down his charges till they are insufficient for producing effective quantities. He may prepare them on speculation or with a limited guarantee. In many of the above cases there arises a special risk that his work be not well and fairly done. The conclusion to be drawn is that upon the position in which the measuring-surveyor is placed and the independence of his examination of all risks, intended to be devolved from the employer to the builder, depends the effect of the contract as regards the transfer of those risks.

When the quantities furnished from the information at the disposal of the builder are prepared with sufficient care, such a contract as is now under consideration gives the builder the following risks:—Alteration in price and efficiency of labour; responsibility to complete by a fixed time under a penalty.

The risks connected with adjoining buildings, old materials, use of estate materials, and of special tradesmen's work are reduced to a minimum, but still probably remain on the employer.

The risks as to regularity of payments, as to the idiosyncrasies of the architect and of the clerk of works, are taken by the builder, and the accuracy of the quantities is either taken by the measuring-surveyor or not, according as it has been arranged that he should be paid.

Of those risks which I have termed employers' risks, means are herein taken to reduce those of excess of cost and of delay in completion. The quality of the work depends on the builder selected.

One important element in the effectual transfer of many of the risks enumerated is careful settlement beforehand of what is intended to be done. In some cases this is possible, and for this purpose the adoption of the system of a contract with the assistance of quantities is the proper course.

If it be objected that the careful consideration here pointed out is no business of the surveyor, but is altogether that of the architect, the natural reply is, that in the proper view of the case, this careful consideration, this endeavour to eliminate questionable risks, and to clear up questions which might lead to misunderstanding in the course of the work, and consequent contention, is one of the *raison d'être* of the surveyor's position; that if he maintains this he will maintain the standing of the measuring-surveyor, as a professional man, and if he lets go of this position, and allows, knowingly or carelessly, any question to remain not cleared up which a little care or careful interrogation on his part at the right moment might clear up, then he becomes part of a class whose one-sided and close-sailing evidence has brought much obloquy on the profession.

A class of cases has now to be considered where it is not possible to fix beforehand the extent or nature of the buildings which it is intended to erect.

(D) *Measure and value on a schedule.*

In such cases the ordinary course is to arrange that the work executed shall be measured and valued at an agreed schedule. The changes in the incidence of building risks in this case from the last-mentioned are as follows:—

It is very difficult to fix a time for the completion of the work. The questions of adjoining buildings, old materials, use of estate materials, remain with the employer almost entirely, and, in fact, the risks are much the same as in the case of the employment of a



contractor at day-work prices, except that the efficiency of labour rests more completely on the builder.

The first point which requires attention in the working of a schedule, as contrasted with that of a tender on quantities, is this:—In a tender on quantities a contractor can arrange beforehand for his materials in the cheapest market and at the proper time for the conduct of the building, whereas in the case of a schedule he cannot make this calculation; his tender on a schedule is therefore likely to be higher than on quantities for the same work. There are, however, two ways by which this difference between the systems is occasionally reduced in execution. In the case of a contract it sometimes happens that an architect exercises the power of changing materials in the course of construction, and keeping parts of the building in abeyance to such an extent that a builder cannot take any advantage of the condition of the markets—a point which is against the builder under a contract; and in some cases, where works are executed at a schedule, a fair idea may be obtained at first as to the extent and nature of materials required—a point which is in favour of a builder under a schedule.

The next point of difference to be noticed is that of comparative closeness of measurement.

The accuracy of quantities depends on the time allowed for their preparation, and on the care exhibited in the drawings furnished. The custom of furnishing such details as may be relied upon by the surveyor for preparing really accurate quantities, and by the builder for the execution of the work, only survives in cases so few and exceptional that it may almost be left out of consideration. It is an article of faith that such a custom once existed.

Probably it will be near the mark to state that in very careful quantities, taken from general drawings only, there is an excess of  $\frac{1}{2}$  to 1 per cent. (and there ought not to be more), and that there are various labours taken which a builder tendering will consider either not imperative or included in the general description of the work, to the extent of possibly 1 per cent., but not exceeding that on the whole value of the work. These points are commonly discounted by the successful tenderer. In the case of measurement the excess may be considered as occurring to about the same extent, though it is likely to occur in different items from those which are likely to show excess in quantities: moreover, all labours, and only those which are executed, are paid for. These points are also discounted in the case of tenders on a schedule. The cost of measurement may be taken as 1 per cent. more than the cost of quantities, but the cost of measurement of variations is saved, so there is very little actual difference in this respect to the employer.

There are two modes of pricing a schedule in use:—First. The presentation to the builders tendering of a blank schedule, comprising the principal items likely to be required, and the delivery by each of a priced copy, such competitive schedules requiring very careful comparison by means of a supposititious bill of quantities. Second. The presentation to the builders tendering of a schedule already priced out by a surveyor, and the delivery by each of a tender, at so much per cent. above or below the surveyor's prices, and, as variations of this arrangement, may be added, the use of a published official or trade price-book.

The objection to the first is that a large amount of special trouble is thrown on the builders tendering, who, to some extent, work in the dark, and the prices sent in are likely to vary very much in rate of profit in the several trades, and an endeavour is fostered on the part of the builder or employer to manipulate the work so as for one of them to gain an advantage over the other.

The production of an original suitable schedule, carefully priced out according to the exigencies of any special case by a surveyor, is a very difficult affair, and one seldom carried out. The second case commonly degenerates into the use of a recognised price-book or public schedule, to which objection may generally be taken, that the public schedule is inapplicable to the special circumstances, and is commonly of old date, and that the price-book is based on assumed prime costs, and its application implies a re-examination of all prime costs. In fact, there will generally be much guess-work, and therein an additional cost to those concerned, which, in a cutting business (such as building), will needs end in the employer suffering in some way.

Another point to be considered is that in building works, both contract and schedule, the circumstances of the case often vary so much from those contemplated by both parties at the commencement that in fairness, for more or less of the work executed, the builder is entitled to be paid at different rates from those first contemplated; and these changes involve so much consideration that, on a reference, and occasionally as a mode of avoiding litigation, the actual prime cost to the builder has to be ascertained as a basis for the fair payment for the work. This brings us to

(E) *An agreement to allow the builder a fixed percentage on his prime cost.*

In this case it is recognised that the various risks are on the shoulders of the employer, but, instead of endeavouring to pass off many risks which he cannot control, and making his interest

antagonistic to that of the builder, thus adding another to those he may have to fight in the course of his building operations, the employer faces the risk of an account prepared by the builder, with or without supervision, and trusts to obtaining in exchange the best efforts of the builder in economising time, in which the builder is especially interested, as well as in the economical use of materials and labour.

Such an agreement implies that the employer is one who erects buildings as a business, and that the builder is one who carries out buildings in a known and efficient manner. It implies that there is no intention on either side to best one another. It is therefore usually accompanied by mutual knowledge of the two parties.

In such cases the preliminary questions which always require special consideration and settlement beforehand include superintendence and the use of plant and establishment charges. The terms of agreement usually involve the charging of certain items specifically, and the charge of a percentage made up of two items—one for establishment charges and one for profit.

It need hardly be said that these percentages must vary very much with the class of work required, and with the position and extent of work intended, and also with the position which the builder may hold in the class of tradesmen.

In the above notes it has been endeavoured to treat the subject from a surveyor's point of view. Let it not be supposed that it is wished to underrate the necessity for an architect. The business of the measuring-surveyor is a branch of architecture, not conveniently carried on by the same person who is engaged in designing, and the opinion should be emphasised that one of the greatest risks which an employer ever runs, and one which, if he does run, he may thank himself for, is that of endeavouring to carry out building operations without the assistance of an architect. One principal purpose of the employment of an architect is to see that a result is obtained commensurate with the means employed; but this result is not measured by cubic contents of building alone, but by convenience, suitability, and representative character—all of them other words for true economy. Under general circumstances these requirements can only be obtained by the employment of an architect, who is responsible professionally for the result. He must be treated as an adviser and confidant, not as a servant or contractor.

Some of the difficulties have been mentioned which may be placed in the way of a contractor or of an employer from having an architect of insufficient experience, or of unwillingness to learn; but such faults are to be found both in builders and employers, and dealing with human nature involves risks overcome only by experience and by the habit of acquiring information.

The subject of the selection of an architect, and the position which the surveyor should take if he be employed (and who so fit?) to assist in such selection, is one which, as Sir Walter Scott says in the second chapter of "The Pirate," ought not to be discussed at the conclusion of a chapter.

## ABERDEEN CATHEDRAL.

THE annual meeting of the heritors of the parish of Old Machar was held in the Music Hall Buildings, Aberdeen, on Tuesday. The chief subject under consideration was the proposed further restoration of the cathedral. The former restoration committee, who have a balance in hand of 576*l.*, offered to make the sum over to the heritors, provided they undertook the restoration of the large window in the east end. This work involves the removal of a small, ugly, and incongruous window and an adjoining wall, filling up what had been the chancel arch, and the proposal is to substitute a large window with tracery work, filling the larger part of the span of the arch. Mr. Rowand Anderson, A.R.S.A., architect, Edinburgh, who had been consulted by the Restoration Committee, prepared two alternative plans, one costing 725*l.* and the other 894*l.* The committee recommended the adoption of the cheaper design. The Standing Committee of the heritors resolved not to carry out the work themselves, but offered to contribute 100*l.* to its cost. The Acting Committee in turn declined to undertake an uncertain liability for the cost of the proposed alteration. After considerable discussion, it was in the end unanimously resolved that on the distinct understanding that the Restoration Committee supplement whatever contributions may be required to carry out the alterations and improvements approved of by the Standing Committee, the heritors vote a sum of 200*l.* instead of 100*l.* to the Restoration Committee for the purposes contemplated. The surplus revenue for the year, it was stated, amounted to 39*l.*, which, with the balance in hand at the beginning of the year, 228*l.*, made the total surplus 267*l.*

Messrs. Legrand & Sutcliffe have sunk one of their Abyssinian tube wells at the infirmary which is in course of erection at Benton, near Gravesend. The site being difficult, it was found necessary to drive the well to a depth of 110 feet, when a copious supply was obtained. The work was inexpensive, and occupied in execution only four weeks.



## NOTES AND COMMENTS.

THE new English Dictionary which Dr. MURRAY is editing is founded mainly on materials collected by the Philological Society. It will furnish libraries with a work that can sustain a comparison with the great "Dictionary of the French Language" which was compiled by M. LITTRÉ, or the "Wörterbuch" of the Brothers GRIMM. The editor has obtained assistance from English and American scholars, and he states that he "has been continually obliged to consult specialists on various points—literary, critical, philosophical, phonological, bibliographical, historical, scientific, and technical." But in the list of advisers we are unable to discover a single name that is associated with the history or practice of any one of the fine arts. This omission should be remedied without delay. As we are speaking of dictionaries, it may be mentioned that Messrs. CASSELL have issued the first part of their "Encyclopædic Dictionary"—heretofore published in volumes. It has been carefully prepared, and the definitions, instead of being confined to a few words, become, wherever it is necessary, brief descriptions. The dictionary, which is largely illustrated, is deserving of a place in household libraries.

THE Fine Art Exhibition which was lately held in the ancient town of Dunfermline has been very successful. There were 807 works exhibited, and about 130 found purchasers, which is a large proportion for a small town. Among the paintings sold were *December Morning at Chartres*, by Mr. A. H. HAIG, and *Blickering Hall, Norfolk*, by Mr. R. PHENÉ SPIERS. In addition to the season ticket holders, there were over 7,000 visitors, including many of the working-classes. An Art Union in connection with the exhibition realised 229*l.* 7*s.* by the sale of shilling tickets, and the prize-winners generally added a considerable sum to their prizes in order to secure favourite works.

THE great storm of Saturday last testifies to the soundness of English building. As much as possible has been made of the damage to property, but, after all, it amounts to little more than the fall of a chimney-pot here and there and an occasional slate from private houses, and of a sheet of lead from church roofs. A part of a wall tumbled down in London; but, considering the length of walling in the metropolis, this one instance need not alarm the public. The most serious damage is the reported destruction of a breakwater in the Isle of Man, which cost 70,000*l.*, and was an example of the engineering construction which is so often held up to architects as a model for imitation.

THE gift of 1,200*l.* to the Society of Arts from Mr. W. WESTGARTH, to be awarded as prizes for essays on dwellings for the poor, and on the reconstruction of central London, should inspire a great many architects to enter in the competition. The money has been appropriated in a rather sensible way. The Council propose to give 250*l.* for the best practical essay upon the re-housing of the poorer classes, and especially of the very poorest classes, of the metropolis; 500*l.* for the best practical essay upon the whole subject of the sanitation, street re-alignment, and reconstruction of the central part of London; and three prizes of 150*l.* each for—(1) The best treatment of the engineering considerations; (2) For the best treatment of the agricultural considerations; and (3) for the best treatment of the sanitary considerations. The prizes are sufficiently large to attract thoughtful work, although it is generally said that prize essays are not prized. The essays are to be sent in not later than December 31, 1884. The awards will be made by the Council upon the recommendation of judges to be appointed by them, and will be final. The only defect in the conditions is that which stipulates the printing of essays before sending in.

WE have often remarked on the want of nationality displayed by the Roman Catholic clergy of Ireland in paying every year large sums for foreign vestments and church ornaments, although work that would answer as well could be obtained in Ireland. The Irish schools of art can with difficulty be sustained, for the students feel they can gain no patronage, however well they may design; and yet the value of the Belgian and French work imported into the island

amounts to a very large sum. Mr. BAGWELL, who at one time was an Irish member, has now drawn attention to this subject. The convents should, he says, supply all the vestments which are required. The foreign vestments are not good in style, and the eyes of the peasantry are in consequence made familiar with bad art, and from seeing it in churches believe that it deserves admiration. The ornamentation of secular work appears to be confined to representations of harps, wolf-dogs, round towers, and shamrocks; and few things can be more absurd than the articles in bog oak having those forms, and which are supposed to exemplify Irish art. An exhibition of Irish decorative art is about to be held in Dublin, and, unless the committee of selection are rigid in maintaining a proper standard, many things will be seen which will make the judicious grieve.

THE Education Department have ordered that in two Board schools in Ipswich which have been lately erected the parallel desks are to be replaced by dual desks, five rows deep, in all rooms exceeding 20 feet in width. The plans, it is said, were approved and the loan recommended by the Department on condition that the desks should be dual, and that condition cannot be altered. "If," adds the secretary, "the alteration was made by the architect without the authority of your Board, it is for your Board to see that the unauthorised alteration is remedied." A suggestion of this kind may dangerously affect an architect's career, and Mr. BINYON has protested against it. The dual desks were avoided on account of economy, and if the rooms were made 22 feet wide instead of 20 feet it was also with a view to economy and efficiency. But Mr. BINYON did, it appears, substitute green slates for tiles in one of the schools without informing the Board, and this gives some people an opportunity of alleging that there have been unauthorised deviations from the plans.

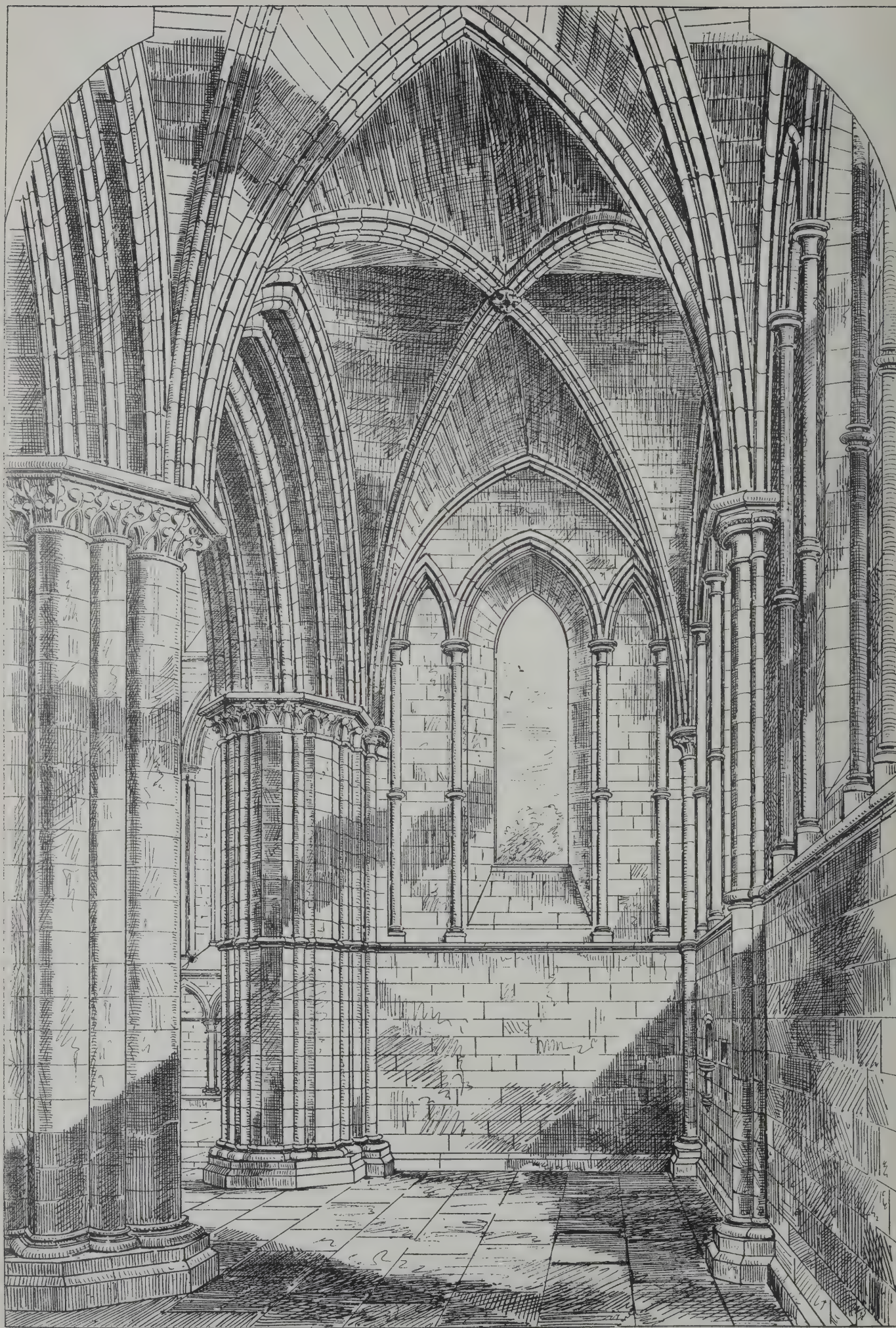
A FEW years since there was complaining in this country when it was announced that the Government were unable to purchase the collection of antiquities brought by General DI CESNOLA from New York. It was at once transferred to New York, and there purchased for the Metropolitan Museum, the price paid being 110,000 dols. The General was also appointed director of the Museum. One of his friends is Mr. GASTON L. FEUARDENT, who had charge of the collection when it was in Europe. After a time a breach came between them, and Mr. FEUARDENT announced publicly that the collection was not what it was declared to be by the vendor, and that some of the statues were "a fraudulent patchwork of unrelated parts." The General said that his critic was malicious in his criticism, and in consequence an action for libel is now in progress. The trial is, however, of more than local interest. There is scarcely an antique statue in Europe which has not been restored, and in many cases the extent of the vamping has been concealed, as if it were a State secret. Take, for example, the *Venus of Milo* in the Louvre. It was only when the statue had been exhumed, after Paris was free of Prussians and Communists, that the internal tenons for keeping the parts of the figure together were discovered, and no one could tell how much the parts had been planed in order to bring them together. It is possible that originally the statue had a different pose from that which is now admired. Some of the French archæologists who drew attention to the laboratory secrets in this case, acknowledged that England was the only country where a statue was left in the condition in which it was found.

THE case of CARR v. HENRY RENDER, Limited, has been again tried without any advantage to either side. In 1875 Mr. CARR took a lease of a warehouse, and next year he let one of the floors to the defendants. Another floor was afterwards let. In 1877 a part of the building fell, and the owners brought an action against Mr. CARR for damages. The jury ascribed the fall to overloading of the floors by Mr. CARR's tenants, and in consequence judgment was given against him. He then brought an action against the defendants claiming 10,000*l.* damages; the defence was that the premises were not fit for stores. In a case of this kind, where the building no longer exists, it is very difficult to say whether a floor was originally weak or had been rendered so by neglect and overloading. There were able counsel, but the jury, after some days' hearing, were unable to come to a decision.









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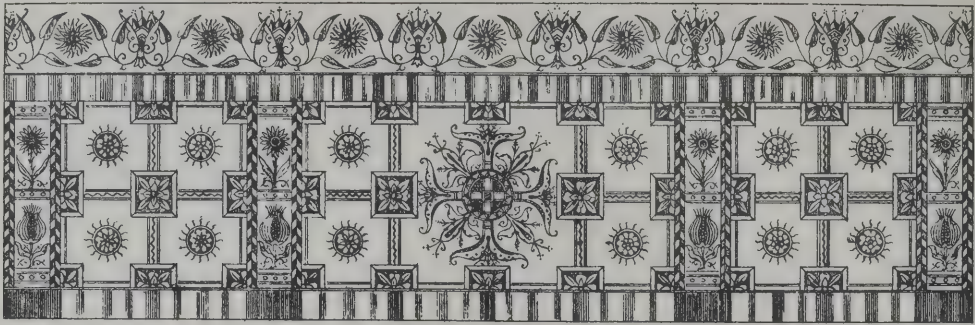
ST. MARY'S CHAPEL, ARBROATH ABBEY.

DRAWN BY GEORGE S. AITKEN.





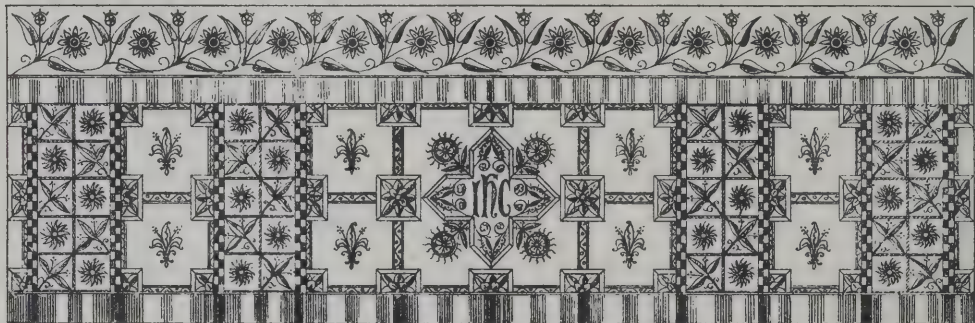




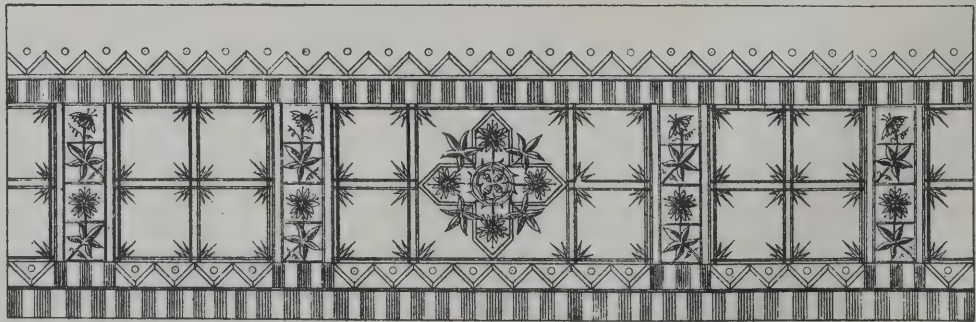
WHITE.



GREEN.



RED.



VIOLET.

A SET OF ALTAR FRONTALS. DESIGNED FOR HAMMERSMITH PARISH CHURCH.

BY HUGH ROUMIEN GOUGH. FRIBA

Sprague & Co. 22, Martins Lane. Cannon St. EC

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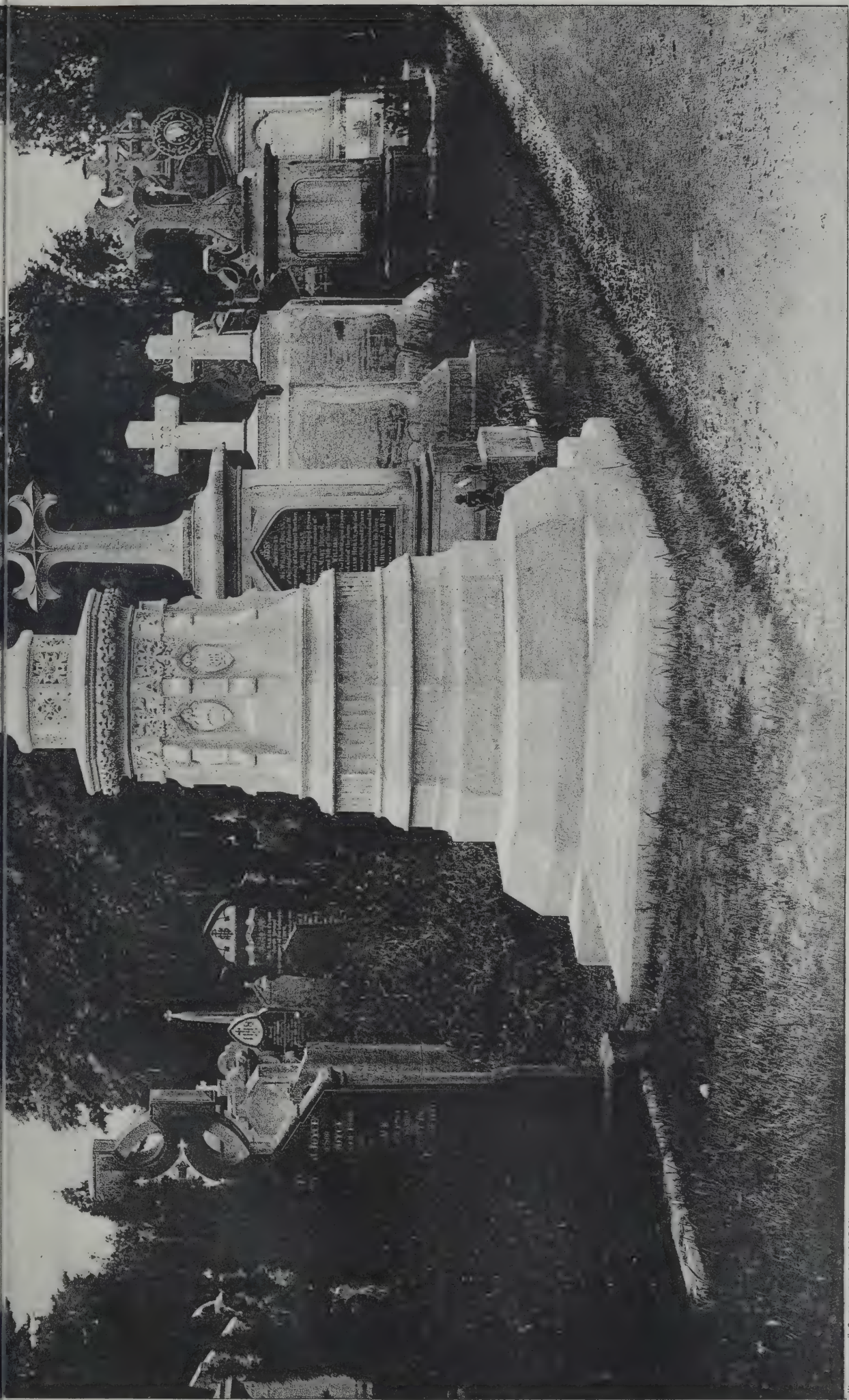




Die Architektur. Fig. 2. 1884.







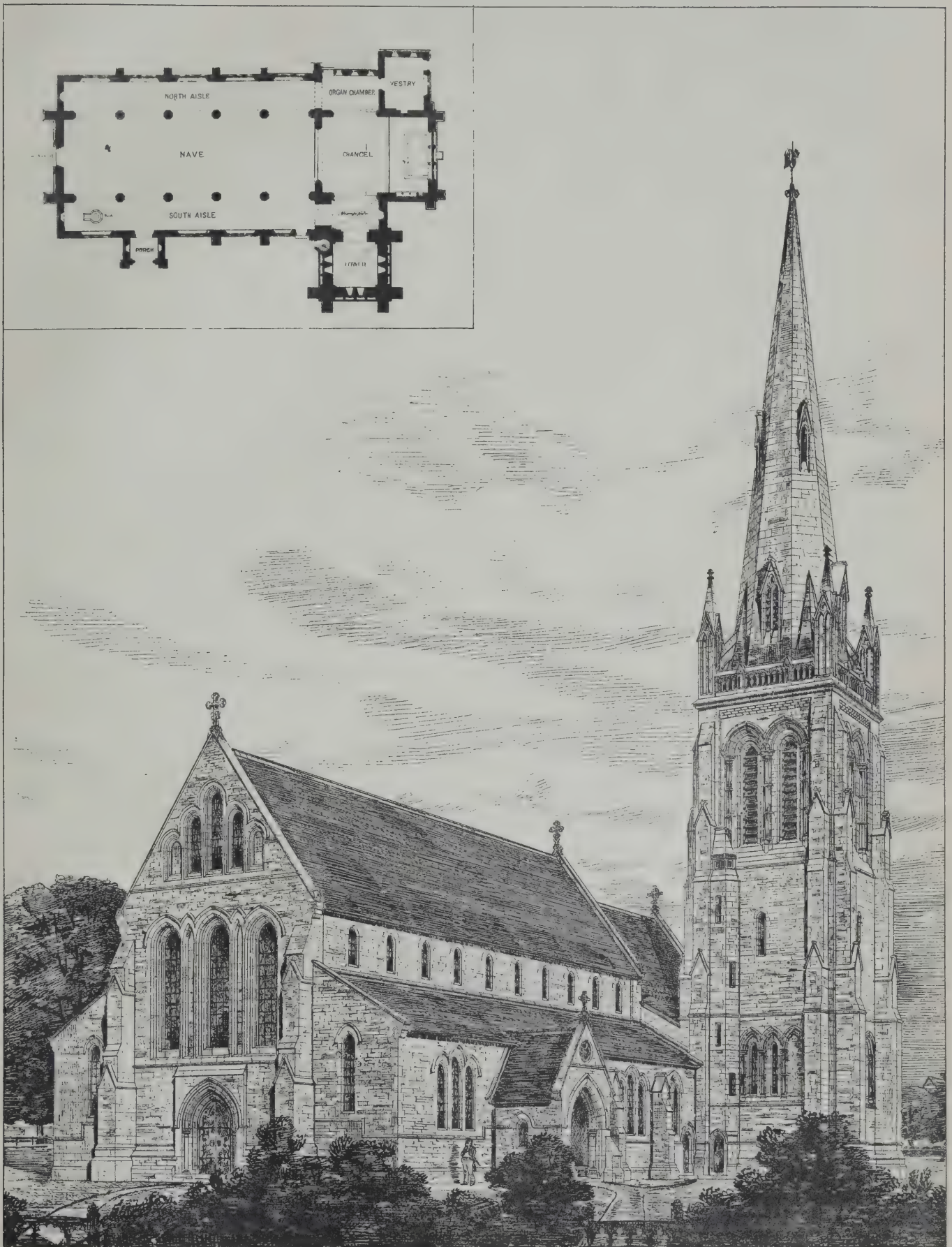
"INK-PHOTO", SPRAGUE & CO., LONDON

MONUMENT IN GLASNEVIN CEMETERY,  
OF  
THOMAS HENRY BURKE, UNDER SECRETARY FOR IRELAND.  
( Assassinated in Phoenix Park in May 1882. )  
THOMAS DREW, RHA, ARCHITECT.









HOLY TRINITY CHURCH, WHITE CROSS, HEREFORD.

FREDERICK R KEMPSON, FRIBA









"INK-PHOTO", SPRAGUE & CO., LONDON.

EASTCHEAP BUILDINGS, LONDON, E.C.







## ILLUSTRATIONS.

THE BURKE MEMORIAL, GLASNEVEN.

THE memorial cross illustrated in this week's number will have some special interest as commemorative of a painful historic incident—the murder of Mr. THOMAS HENRY BURKE, Under-Secretary to the Lord-Lieutenant of Ireland, who fell with Lord FREDERICK CAVENDISH on May 6, 1882, in the Phoenix Park, Dublin. The memorial was erected by the resident or stipendiary magistrates of Ireland, with whom Mr. BURKE had for many years an intimate official intercourse. The deceased gentleman was a native of Galway, and from that county the materials for the memorial were chiefly derived. The base, plinth, capitals, &c., are of fine limestone from Ballinasloe, the fluted shaft of the column is of a polished black granite—a beautiful variety derived from the County Down mountains. The cross surmounting the whole is of an extremely hard description of black Galway marble, the form being borrowed from a well-known and beautiful thirteenth-century type—the processional Cross of Cong in the museum of the Royal Irish Academy. The work was designed by Mr. THOMAS DREW, R.H.A., and executed by Mr. SHARP, of Dublin; the carving being by Mr. HENRY EMORY. The whole stands about 25 feet high.

HOLY TRINITY CHURCH, HEREFORD.

THE necessity for further church accommodation at the west end of the city of Hereford has long ago been felt, and efforts have from time to time been made to supply this need, which, however, for want of means have always fallen through, until the beginning of the year 1883, when a committee was formed for the purpose of building a church in the Whitecross district for the benefit of parishioners in the three parishes of All Saints, Holmer, and St. Nicholas. The committee consulted Mr. F. R. KEMPSON, F.R.I.B.A., of Hereford and 7A Whitehall Yard, London, and we publish his design this week. The nave, with north and south aisles and south porch, are now being erected, and the foundations for chancel, tower, organ chamber, and vestry are being put in. The dimensions of the church, when finished, will be as follows:—Nave, 90 feet by 27 feet; aisles, 90 feet by 10 feet 6 inches; chancel, 38 feet by 27 feet; south chancel aisle, 17 feet by 10 feet 6 inches; organ chamber, 20 feet by 12 feet; vestry, 18 feet by 14 feet. The tower will be 25 feet at the base; the height of tower and spire about 180 feet. The church will accommodate between six and seven hundred. The contractors for the portion of the work in hand are Messrs. HUCKSON & WARWICK, of the city of Hereford. The Lord Bishop of the Diocese has fixed Tuesday, the 19th inst., for laying the foundation-stone, and subscriptions are urgently needed to enable the committee to carry out their undertaking.

ALTAR FRONTALS.

THIS set of altar frontals has been designed by Mr. H. ROUMIEU GOUGH, F.R.I.B.A., of Queen Anne's Gate, for the new parish church of Hammersmith, which has recently been consecrated. The church is an unusually large one, and the altar itself is 10 feet long by 3 feet 6 inches high. The designs are somewhat bolder than is customary in embroidered work, in order that they may be effective when seen from a distance. The right of reproducing the designs has been acquired by Messrs. JONES & WILLIS, of Great Russell Street and Birmingham, the well-known church furnishers.

EASTCHEAP BUILDINGS, E.C.

THIS building has been lately erected by Messrs. BYWATER, and is a characteristic example of the class of work which is now in favour in the City. As a lift has been introduced, all the offices are easily accessible by visitors.

ST. MARY'S CHAPEL, ABBROATH.

ARBROATH ABBEY was founded in the year 1178, and completed in a little more than half a century. Its noble ruins indicate a building of great original magnificence. The chapel, of which the illustration is a restored view, is situated in the south aisle to choir. Though roofless and interfered with by a fifteenth-century sacristy of Abbot PANTER'S,

sufficient detail exists to afford material for the restoration here represented. The abbey and abbot's house are well worth careful study, exceptional bits of detail occurring here and there which differentiate the old ruins from others of the same period. Unfortunately the sea air has acted injuriously on the soft red sandstone of which it has been built, but in sheltered nooks the original detail may very easily be traced. The illustration is a reproduction of a drawing by Mr. GEORGE SHAW AITKEN, architect, Dundee.

## THE ARCHITECTURAL ASSOCIATION.

THE fifth ordinary meeting of the Association was held on Friday evening, the 18th ult., Mr. Cole A. Adams, president, in the chair. The following gentlemen were elected members:—Messrs. S. Cottingham, A. E. Smith, W. S. Hill, Woodroffe, G. Cole, W. E. Elliman, and C. Beaupré.

Mr. ASTON WEBB then read a paper, of which the following is an abstract:—

## Plasterwork.

It would not be very rash to prophesy that iron and plaster are the two great building materials of the future. It is proved beyond doubt that plaster is one of the most fireproof materials, and iron and wood are better protected by it from fire and heat than by any other. Taking concrete as of the plaster family, floors are largely made of it, and walls also, though with less success. As a sanitary material in hospitals, and such like, nothing is so much approved of for floors, walls, and ceilings. For comfort in rooms there is undoubtedly nothing better than a plaster ceiling; it is draught-excluding, and, to some extent, sound-excluding also. Again, for decoration, more especially in secular buildings, what material more quiet, and at the same time rich and delicate, than plaster? The use of plaster is almost coeval with the art of building itself. But the most glorious time plasterwork has ever known was during the sixteenth and seventeenth centuries in Italy, when a great deal of the most exquisite work was done, together with a great deal that was wrong in principle and design; and in England, during the Elizabethan era, some of the most characteristic and appreciative plasterwork was carried out. Inigo Jones is credited with introducing into England the heavy panelled work of the Italian masters, and immediately plasterwork declined, to be revived again towards the close of the eighteenth century by the brothers Adam, who did much excellent work in their own manner. Little came of it in influencing the art generally. Its traditions were kept alive, however, and Messrs. George Jackson still possess many of the original models. But plasterwork generally became more debased than it had ever been before; and as the real Goths did little for it, so the nineteenth-century Goths did still less—witness, for example, the New Law Courts, where decorative plaster is almost entirely absent. Now a brighter day seems to be dawning for plaster, and, though it cannot yet be said to have got out of its archaeological trammels, it is reverting to a rational treatment; and with a freer style of architecture in vogue, we may even hope it will develop characteristics distinctive of the present time. In designing plasterwork the chief points to be remembered as to its capabilities and qualifications are the following:—Firstly. Plasterwork is essentially decorative, and as an applied material it is unable to bear tension or to support weight: it should, therefore, as a broad principle, not be made to appear as if it did so. Secondly. In order to suggest the material and to avoid an appearance of strength which it does not possess, there should be a general flatness of treatment, and on wall spaces a predominance of horizontal lines. Thirdly. As the material is not suitable for imposing features, and where great dignity and effect are required, they must be sought in the breaking up of the walls by bays and other features, and in the constructional form of the ceiling itself rather than in the enrichment applied to it. Fourthly. All ceiling designs should be studiously quiet and equally covered over their whole surface, and being out of a convenient range of vision, should not have work of the highest interest placed upon them, as it can only be examined at great disadvantage. Fifthly. As all the work at the present day is cast, and therefore capable of almost indefinite repetition, great care should be taken in the design of any enrichment, and none but work of a really high artistic merit admitted. Sixthly. All imitation of stonework or other materials should be carefully avoided.

Plaster, when used externally, has been limited almost entirely in this country to domestic work. In all parts of England where timber building has been carried on, the interstices have been filled with plaster, making good warm walls where carefully executed with proper air spaces. Effect was obtained either by enriching the plaster panels with stamped or carved ornament, more general in the south of England, as at Ipswich; or by obtaining an effect by reversing the process and cutting the wood framing into patterns, more often found in the north, especially Cheshire. These enriched panels are used in modern work; as, for example, in Mr. Shaw's work at the Swan House, Chelsea, and Mr. Holl's



house, and in much of Messrs. Ernest George and Peto's work. They are carved by hand, and is almost the only work now executed in this way which, though it adds to its cost, increases its interest. In stone districts, where the stone or brick was of a porous nature, the upper portions of the walls, or sometimes the whole, were rendered in plaster, and often a light pattern stamped on them with charming effect. Another form of external plasterwork is that known as *sgraffito*. This is composed of two layers of cement, the under coat being tinted a darker colour to choice, and the upper being the usual buff colour. The design is drawn on the surface, and then cut down until the darker layer is reached, thus giving the effect of a good outline drawing. Properly treated it may, undoubtedly, become a very effective decoration, more suitable for external than internal work. It has been, perhaps, somewhat discredited by the result of one or two conspicuous examples which have not been altogether fortunate. The proper treatment of this mode of decoration appears to be in bands used sparingly and not too close to the eye, somewhat in the way in which the Lucca della Robbia ware was often used in Italy: to cover a whole building with it is unrestful, and the ground also should be toned down to accord with the local colour of the building. External decorative plaster should be designed as much as possible in horizontal bands, without any leading vertical lines, which appear to be against the spirit of the material.

One of the points that appear to be of importance in the internal treatment of plaster is, that the treatment of the walls should be horizontal rather than vertical, as immediately they become prominently vertical, they partake of the character of supporting the ceiling, and the material is at least apparently put to a purpose for which it is unsuited. It will be said that sufficient dignity cannot be given to large rooms without some such treatment; but a judicious use of plaster panelling, as at the Ducal Palace, Venice, may attain this, or a high wood panelling, which is also a more suitable material near the floor, and less liable to be injured. The Italians were also very fond of plain vaulted ceilings in plaster, perfectly plain, but elaborately decorated in colour, and these, perhaps, were their most successful ones. The most celebrated of these, though by no means the best, is that of the Sistine Chapel in the Vatican at Rome, said to have been painted under protest by Michael Angelo. To enter this chapel, and see visitors lying on their backs all round the room, attempting, with the aid of opera-glasses, to examine the paintings, must show at once that a ceiling was no place for such work as this. The vaulted library of the Vatican, on the other hand, decorated near the eye with painted arabesque, is altogether a successful treatment. The general impression left on any one after studying the Italian plasterwork must be intense admiration for their wealth of imagination and endless variety and delicacy in their details, but over all a sense of incongruity, as if the true treatment of the material had been missed, and that of stone adopted; so much so is this the case, that from photographs or sketches, it is often impossible to tell or guess whether the material used was marble or plaster. During the time all this magnificence was being executed in Italy, a quieter but truer recognition of plaster and its merits was being given by our own architects during the sixteenth and seventeenth centuries. Admirable specimens of the best interiors of this period have been illustrated in Nash's well-known book. Their characteristics are simple and similar, a flat ceiling cut up with delicate intersecting ribs, hiding no constructional features, nor appearing to do so; all carved enrichment very sparingly used, and the ceiling finished against the wall with a plain cornice, the wall surfaces usually either panelled entirely in wood or three-parts up, and a handsome elaborate frieze above; all plaster being in horizontal bands, and the vertical lines invariably in wood. One of the noticeable elements in design at this time is an absence of effort to connect the design of the ceilings with the walls. They did not seem to feel that this was necessary, as the Italians did, and it relieved them from many difficulties. In the larger ceilings, and where important beams were absolutely necessary, these were often shown as wood. Pendants were employed to mark the intersection of the ribs, by bringing them down some distance below the face of the ceiling, and finishing them with a boss or moulded pendant. This appears to have been with the object of breaking up the flat surface, and affording more relief than the light ribs could do. Great dignity and variety was given to their apartments by deep and lofty bays breaking up the long wall spaces, and by elaborate and massive chimneypieces reaching to the ceiling, the ornament being usually flat and small in scale, with little or no undercutting in the best work. The details of the ribs, cornices, and other features are all worthy of careful study. During this period the mouldings are flat, fine, and in flowing lines, quite unlike those used before in any other material, but admirably adapted to the positions on which they are placed. After the Elizabethan and Jacobean period came another revival, whose traditions have been handed down to our own day, led by Stuart and carried to perfection by the Brothers Adam. The increased study of the work of the ancients had its effect on plasterwork as on other materials, and a flat decorative treatment, very similar to that shown in the Pompeian baths, was employed. Hemispherical vaults were again introduced, and flat plasters divided the wall space. These pilasters hardly, however, could be called constructional. The

enrichment on the ceilings showed great delicacy of treatment, and covered them with a lace-like enrichment which, without the geometrical precision of the earlier sixteenth and seventeenth-century work, still sufficiently covered the surface to prevent any portion being obtrusive. A distinctive feature of this class of work is the way in which the plasterwork spread itself over other portions of a room to which it had not previously been applied, especially the doors and chimneypieces; but beautiful as this latter work is, it is hardly to be commended. Doors and chimneypieces were made of wood, and all the enrichments in plaster stuck on, the whole being painted, so that it was impossible to tell whether it was carved or not. The extreme delicacy and beauty of the design, however, made much atone for the defective principle. There are many examples of the Brothers Adam's works in London, which are very beautiful; but in the present day it is mere copyism, and no designer has yet come forward to carry their work a step forward. French work, though luxurious, extorts our admiration, we feel if it must be wrong in principle from beginning to end. Like some of the Venetian work, it was often used merely as huge frames for pictures; the walls were cut up into panels, and the doors and other features ornamented with endless scrolls. At the present day much is being done which can be admired. Small benefit was derived by plaster from the Gothic revival, and perhaps it is partly owing to the difficulty in using this material internally that has led to the abandonment of that style to so great an extent for domestic purposes. A very wonderful example of modern plasterwork is to be seen at the Grosvenor Hotel. The treatment is very original, and consists, generally speaking, in dividing the walls and ceilings into panels of various sizes and covering the fields with very highly-relieved enrichment of naturalistic foliage. The relief of this foliage is perhaps too great, and the general treatment not flat enough for our idea of what plaster should be; but one cannot but admire the amount of boldness and originality of its design. Our modern Italian buildings show much beautiful plasterwork, and have followed, as a rule, the Italian method, and though often with exquisite detail, added but little either in originality or appropriateness to what had previously been done, and for the most part the mouldings and enrichments could be equally well worked in stone, and, as a fact, are worked in either material. With the introduction of a Domestic architecture—founded, perhaps, on Jacobean, but which may in time to come be recognised as Victorian—more attention is being paid to plasterwork, and in some ceilings by Messrs. Ernest George and Peto (of which specimens were shown), the principle of flatness has been carried out, and its admirable appropriateness to ceiling design. All the requirements of plaster design seem to be met. The dining-room at the South Kensington Museum is a well-known and very good example of modern costly work, with a high wood dado, its walls covered with a freely-treated ornament in low relief and panelled frieze. An admirable ceiling has also lately been added over one of the long galleries, which is a good example of the employment of modern means. Here the ceiling and floor over are carried by iron box girders at intervals across the gallery, and the intermediate spaces have apparently small T irons running both ways, forming squares, say, of 3 feet square; the underside of these irons also show, and the square spaces are filled with slabs of decorated plaster, each of the same design, and the whole is whitened plaster and iron, making a most handsome and sensible ceiling. The iron supports are sufficiently apparent without being obtrusive, and blend well with the ceiling design. Again, at the Natural History Museum, admirable advantage has been taken by Mr. Waterhouse of the Dennett arch, by showing the construction and merely enriching the soffits with ribs. This appears to be a great success, and a distinct advance towards a modern form of ceiling. The iron girders are carried by terra-cotta piers, which really carry the weight, and the girders are encased with plaster, no doubt as a protection from fire, which appears to be a sufficient reason. The plasterwork of the City Liberal Club, by Mr. Grayson, is an example of restrained plaster design, which every one should see who is interested in the subject. A quiet, flat panel treatment has been adopted, with an entire absence of fussy enrichment, which is quite a relief to look on. In ordinary living-rooms it is usual to have a cornice with a cove in it, the whole carrying as many coarse and vulgar enrichments as can be crammed into it, and a huge and overpowering centre flower. The latter should be omitted, on the principle that however the ceiling is enriched it should be equally covered. The cornice should bear some proportion to the size of the room, and may be used to improve its proportions by a somewhat deep frieze on the wall if the room is too high, and if too low it can be heightened by placing most on the ceiling. Little wood ribs on a ceiling are an abomination, unless they are painted in the same tone as the ceiling; the small dark lines wandering over the surface are distracting. It is better to be without enrichment unless a design can be afforded. In a small room a carefully-designed moulding looks equally well, and may be coloured in with the walls with good effect. In larger rooms a high wood dado with diaper plaster above, or low relief ornament, looks well at a moderate cost; but plaster panelling is not convenient for pictures. Where plaster is painted, it should be on flat plain surfaces, as at the Vatican Library,



as the effect of much decoration on relief work has the effect of flattening it. If relief work is coloured, it should be done in broad washes, and, above all, should not be picked out. The Brothers Adam tinted some of their ceilings with light tints on the grounds, to throw up the enrichment, and record that they were much pleased with the result. The greater the richness of a ceiling in relief the less colour there should be, and with some ceilings nothing looks better than a light cream colour, not distempered, but either left the natural tint of the material, painted, or wax-polished. This hardly applies to such ceilings as the picture-frame ones of the Doge's Palace at Venice, or the modern French work, which will take any amount of gilding and colouring, and produce a most gorgeous effect. The greatest change in the execution of plasterwork has been made comparatively recently by the introduction of cast work. Up to the time of George II. all enriched work was modelled by hand; since that time, with the exception of some external work, the whole has been cast. All enrichments are cast and cleaned off by hand, and in very high-class work by the artist himself, who is thereby enabled to put some individuality into it. Messrs. Jackson employ four varieties of moulds—a plaster mould, gelatine mould, wax mould, and brass mould. The plaster mould is used where the work is much undercut, such as in a Corinthian cap where the mould is quite an elaborate contrivance of many pieces, and it may be assumed that where a mould of this sort is found necessary there is a departure from plaster treatment. The gelatine mould is that most used, as, owing to its having a little "give" in it, the plaster cast can be drawn from it even if slightly undercut, and it is also sufficiently firm to enable the plaster to be pressed well into it, and so to secure a sharp casting. A wax mould is very similar, but will not stand so many castings being taken from it. A brass mould is usually used for small running enrichments where great sharpness and a large number of castings are required. All these moulds, except the brass, are soon a little worn, and a good plasterer will only take a limited number of castings from the same mould. The continuous casting from the same mould is the cause of much of the miserable stuff we generally see. Plasterers appear to agree that the best effect is obtained by casting. The fibrous plaster introduced by Messrs. George Jackson consists of two coats of plaster, with a layer of thin canvas between. By this method an enriched ceiling or cornice is cast in slabs; the cornice, enrichments and all, are cast in long lengths, and the whole screwed up to the joists without lathing or rendering of any sort. What is roughly called plasterwork for internal use is comprised of three materials—very fine plaster, papier-maché, and composition. The papier-maché is, as its name implies, made principally of paper, and is used especially for French work and work of that character; while the composition, which is made up largely of glue, is used for fine "planted on" enrichments, such as in the Adam's work.

A vote of thanks was, on the motion of Mr. Stannus, seconded by Mr. V. Trubshaw, and supported by Mr. H. D. Appleton (hon. secretary), Mr. H. W. Pratt, and Mr. Cole, unanimously passed to Mr. Webb for his paper, and the proceedings terminated.

### PATENT LAW.\*

THE new Patent Law will not only remove some of those financial impediments to invention which in many cases made it impossible for a man to secure a patent, but it will also dispel the mystery that was supposed to envelop the procedure of Southampton Buildings, and which no one but a regularly-ordained agent could understand. There was a time when an inventor appeared to be surrounded by forms that were in all respects, save their unlimited capacity for securing fees, as fabulous as hydras and chimeras. That condition of things was gradually amended, and now and henceforth a man can know with whom he has to deal; and if he pays fees, he has the satisfaction of feeling that no part of them enriches a "deputy chaffwax" in virtue of his sinecure. One effect of the transformation will be a change in the relation between inventors and agents. Under the new regulations it would be possible for a patent to be taken out without the aid of an agent, although this might not always be a prudent course. But when an agent is employed his office is reduced to a minimum, and in the preliminary stages the inventor can be master of the position. It becomes, therefore, the duty of inventors for their own sakes to understand a system which closely concerns them. The regulations have been framed so as to be comprehended with as little difficulty as is possible, and, if they are unknown, the inventor must suffer. According to the old maxim, "Ignorance of the law excuseth no man," and it is especially applicable to inventors who will not take the trouble of understanding what is required of them under the new Act. The "Digest of Patent Law and Cases," which has been prepared by Mr. H. A. A. Gridley, is a guide which will enable any intelligent man to realise what has to be done in order

to obtain a patent; and it points out the risks which must be obviated if the patent is to be secure. The author evidently believes that a writer should never attempt to treat of a subject until he has read himself full upon it, and in this little book we have the pith of many ponderous treatises and reports. It is an example of what can be done in a small space when an author possesses skill in arrangement, analysis, and exposition.

Mr. Gridley has taken care that his readers should understand at the outset the difference between the old and new regulations, and inasmuch as the principle of the law of patents remains as before, he gives decisions of the courts in the judges' own words, which will interpret the meaning of the clauses in the Act of 1883. The first chapter explains who is to be considered "the true and first inventor," and it is seen that the title may be claimed by four classes of persons, viz., any one who first suggests the practical principle of an invention, or who first imports an invention from abroad not previously known here, or who is the first to take out a patent where two or more invent the same thing independently at the same time; or, lastly, any one who renders practically useful an invention not previously known as part of the common knowledge of the State, or not previously practicable.

Something is said about each of these classes, and the reader is made aware of how they are established by judgments as well as by clauses in the new Act. Next, what is an invention is considered, and it is explained to be (1) a new invention, that is, the embodiment of an idea or a principle in some practical mode; (2) a combination of known subjects or existing inventions producing a new, better, or cheaper article than produced before; (3) a new process in producing a known article; (4) a new application of a known subject or invention to a new subject not analogous to the old application. It is needless to say that a great many inventions have been declared to fail in one or other of the foregoing characteristics, and in consequence the patents have not been upheld. Thus, for example, under the third head we find a reference in Mr. Gridley's book to the action taken by the Pennycook Patent Glazing Company. The plaintiffs' process is rightly described as a combination of sheet metal heated in a particular way with ductile metal for fixing glass for roof lights. But "the use of sheet metal in the construction of an astragal was not new, nor the use of ductile metal for fixing glass in windows. In the defendant's process the astragal was of iron, and had no clips. It was held that the defendant's process was no infringement of the plaintiffs', and both were good." In cases of this kind a knowledge of what is demanded would often save a patent, for provision might be made to avoid the use of things likely to be considered not new in the Courts. But, unless the inventor will exercise his foresight, he must expect that rival claims will be set up to his disadvantage.

The remaining part of Mr. Gridley's book is devoted to a description of the proceedings under the new Act, and throughout suggestions are given which will be invaluable to inventors. In preparing the specification and drawings it will be necessary to take if anything more care than formerly, and the cases quoted by Mr. Gridley will often serve as a warning. Thus in one we find an invention was set aside because a circular hole through which flame was to pass had been omitted from the drawing. Another patent was held to be bad because the inventor stated that he intended to make rollers of iron coated with china—not specifying what kind of china. In a third case the patent was declared void because the word "iron," which was in the provisional specification, was omitted from the complete specification. In fact, Mr. Gridley's book is interesting if it were only to show how difficult it is for any statement to sustain the microscopic examination of its words and phrases, which is inevitable whenever a patent case is brought before the Law Courts. One of the most important chapters is that relating to infringement, and all possible attempts are brought under a certain number of heads. Everything has been done to bring legal knowledge in a systematised manner before the reader; and, owing to its scientific arrangement, there is a wide difference between Mr. Gridley's book and the popular but misleading manuals which are sometimes compiled for the guidance of the public in legal matters. The "Digest of Patent Law" is exactly what it professes to be, and we have much pleasure in recommending every inventor to obtain a copy.

### BRITISH ACADEMY, ROME.

AT the annual general meeting of the British Academy of Fine Arts in Rome, Mr. Poingdestre, vice-president, in the chair, the members of the out-going committee were re-elected, after a vote of thanks for their zealous attention to the Academy's interests during the past year. The statement of the accounts showed a clear balance in hand of 1,158 frs., being a slight increase over that of last year. The Academy continues, as usual, open in each season from the beginning of November to the end of March, for study from casts during the day-time and from the living model in the evenings, when the library is also open to the members. The donations during the year towards increasing the funded property of this centre for English art students in Rome (which was founded by Gibson and Eastlake when themselves little more than students) amounted to a very trifling sum.

\* *A Digest of Patent Law and Cases, incorporating the Provisions of the Patents for Inventions Act, 1883, for the Use of Inventors and the Legal Profession.* By H. A. A. Gridley, M.A., Barrister-at-Law, Marcus Ward & Co.



## THE GLASGOW SCHOOL OF ART.

ON Tuesday Mr. Robert Greenlees, the late head-master of the Glasgow School of Art, was entertained at dinner by some of his former pupils, and presented with his portrait, which had been painted by Mr. William McTaggart, R.S.A. Mr. James Sellars, architect, presided.

The Chairman said that for the past thirty years Mr. Greenlees's name had been identified with art teaching in Glasgow, and he had been known as one of the best figure and landscape painters in Scotland. To no other man was Glasgow so much indebted for the position it had reached artistically as it was to Mr. Greenlees, as a very large majority of the artists who formed the school were indebted to him for their earliest artistic training. The good results of his teaching had been also felt over a much wider field by architects and designers of all kinds of artistic work. It would be difficult to estimate the amount of good work which Mr. Greenlees had accomplished in the thirty years of his life which he had devoted to art teaching.

Mr. Greenlees said he felt deeply and sincerely the high honour which had been paid to him, and he would ever look to the work of art with which he had been presented with the greatest of pleasure, and always prize it highly. During the many years he was connected with the School of Art it was ever his endeavour to look to the interests of the students. He tried to direct many of them in the way they wanted to go, while he directed others in the way that they did not want to go. It was not every one who could obtain a good position in art. Still, while many students had obtained good positions as artists, many more had obtained good positions as art workmen. He had received letters from old students, now in various parts of the world—especially America—in which they had thanked him for the way in which he had directed them in their studies. After giving a sketch of the amount of work accomplished by the Glasgow School of Art since he undertook its management in 1863, Mr. Greenlees went on to say he could remember the time when there was no School of Art in Glasgow and very few artists. He remembered when the Brothers Mossman, himself, and several others opened a School of Art on their own account, and a very humble school it was. As far as he could recollect, it was at least up five stairs in a little room in Nelson Street, adjoining the old Post Office, and they even undertook to white-wash and sweep it out themselves. They got a few casts, and worked away with a candle stuck in each drawing-board, the school going on for a couple of years, after which they got the use of the collection of casts belonging to the Dilletante Society, and continued the classes in the Andersonian University. It was in 1843 or 1844 that the Glasgow School of Art was opened, and he did not require to tell them of the success that had attended it, or the position which it now occupied in Glasgow compared with what it did in its early days. When the school was opened there would be about a dozen young lads in the city wishing to become artists. They were now legion. It would be a very strange thing indeed if out of that number they could not establish a school in Glasgow quite worthy of the name of their great city.

## PAINTED GLASS IN GLOUCESTER CATHEDRAL.\*

IT is much to be regretted that in the histories of the religious establishments of the Middle Ages little or nothing is recorded of what must have been among their chiefest ornaments—their coloured and storied windows. Those windows, by the subjects they portrayed, by their inscriptions, their symbols, and their heraldry, contributed much to history; but, with rare exception, the history of the windows themselves is a hiatus in archæology.

Such is, lamentably, the case with the windows of the old Abbey of Gloucester, about which the early history compiled by its first mitred abbot, Frocester, gives account of other arts, and enumerates the detail of comparatively trivial works in them, but entirely omits all mention of the windows. His history closes at the end of the fourteenth century. The choir of his abbey must have been radiant throughout with coloured and figured glass of the finest kind. His abbey was so rich as to command the best of everything. After his time great buildings were erected and filled with glass, both English and foreign, but not a syllable of its history remains.

There is no art or branch of industry in this country about which so little is recorded as that of the making and use of glass. Until we approach the fifteenth century all that is known is gathered from incidental notices of local history. Many vessels of Roman glass have been found, and, in still greater abundance, in Anglo-Saxon tombs; and these last, by certain peculiarities of form and quality, are regarded as of English production. The remains of a Roman glass-house still exist at Buckhold, in Wilt-

shire, a Roman station; but the first authentic account of glass-making in England is in the well-known story of the invitation from the Bishop of York and the Abbot of Wearmouth, at the latter end of the seventh century, and from the Abbot of Jarrow, in the middle of the eighth century, to glass-makers in France to come over and establish their industry in those places. In many parts of England we hear of "glaziers," a term which embraced both dealers in and painters of glass; and as it is entirely unnoticed who their glass was produced by, or where they got it, it is not unfair to surmise that that term embraced also, at least in many cases, the makers of the glass. Of glass painting we know that it was first and for centuries employed for religious establishments. As in the case of all other fine arts, its first home and cultivation must have been within the quiet retreats of the monasteries of gradually christianising Europe, where all the traditions and technicalities of the arts were centred, coming westward from Constantinople and northward from Rome. The earliest account existing of the method of painting glass is the MS. of the Monk Theophilus of the eleventh century. In succeeding centuries we are still left in ignorance about the makers of glass. As it came more generally into use, it was probably made by private persons, and on too small a scale to be classed with the industries peculiar to any place. It seems probable that those Mediæval glass makers were associated with iron smelters, for, in a rough way, they required much the same materials and appliances for their work in iron, lead, and glass; and of this we have indications in Gloucester, especially in and about Long Smith Street, famous in old days for its iron forges, where it is still common, in making deep excavations, to come upon vitreous slag, like the refuse of glass furnaces, in common with cinders and the refuse of iron-work. And further, among the old trade companies of Gloucester, one is described as that of smiths and hammermen, ironmongers, cutlers (saddlers), and glaziers. It is difficult to believe that an industrial art, so early established in the North of England as the seventh and eighth centuries, and of great and growing demand through the Middle Ages, could have died out; or that the numerous and wealthy religious establishments could have risked the supply of glass from anywhere than at home. Still, we have no certain records of its production; and it is not till the time of Charles I. that the first glass-house is recorded to have been built in England, and that was in the Forest of Dean, at Lydney. The foundation of it still marks the spot. The reference to glass as a special industry in Gloucester; and the name of "Glasshouse Yard" as a site in this city, and the glass-houses shown in the earliest engraved view by Buck in 1734, or the bird's-eye plan of the city in Atkyn's History, 1712, were all subsequent to that date.

I regret that the limited time allowed for this paper prevents me from telling you all that is known of the art and the artists of glass painting through the Middle Ages in England; but sufficient is known to conclude that both the glass and the painters employed were English and foreign, as was the case with the architects, and members of the religious communities themselves, paying and receiving visits from the foreign members of their Order. But for the dates and schools of most of the works of Gothic times, we must trust to our own knowledge of styles and technicalities to form any opinion. In our own cathedral there are some noble relics; and the scraps that still remain in every corner of it, and even in the cloisters, testify to the universal prevalence of this art throughout these buildings. I feel bound to mention here, with great respect, the good service rendered to this art by Mr. Waller, the architect, in rescuing numerous relics of old glass, every scrap of which has been subsequently worked up into the windows by modern glass painters, invariably in the same places to which those pieces belonged—*i.e.*, where those places were known—in many parts of the cathedral, but pre-eminently in the third and fifth windows in the north wall of the north aisle of the nave, which are fully half of ancient glass. The two most important relics we possess are the east windows of the choir and Lady Chapel. The smaller remnants in the heads and tracery of the windows are too numerous to mention here. The great east window of the choir is the earliest of them. The choir was enlarged and lined with a web of Gothic tracery by Adam de Stanton, abbot from 1337 to 1351; but probably completed by his art-loving successor, Horton, the contributor of numerous beautiful and costly things to the Treasury. The stonework of the east window must have progressed upward with the rest of that work, as every line of that net-work is consummated in the groined roof. It is all one; there could have been no break in it. The character of the glass in that great window accords with that date. Mr. Winston, certainly the first authority on the subject, assigns from 1347 to 1350 as the date of it. The information gained from its heraldry confirms the date, and the character of the figures and quality of the glass authorise the opinion that it is all of English work. But of this window I need say no more, for Mr. Winston has entirely exhausted the subject in a paper written for the Archæological Institute. In general effect it is magnificent, but in detail it is a wreck. Happily the general contours of the figures have been preserved, but their limbs and draperies are in many cases a mere medley of heterogeneous scraps, collected from the ruin of the figures in the clerestory, and with its outer

\* A paper by Mr. Gambier Parry, read at a meeting of the Gloucester Cathedral Society, and printed in the *Gloucester Chronicle*.



panel filled with a little figure rescued from the wreck of the Lady Chapel. The preservation of this window through the troublous times of the siege of Gloucester is probably rightly assigned to the care of Governor Massie and Alderman Pury the younger, an influential Parliamentarian, a man of literature and cultivated tastes, who, with his friend, Sir Matthew Hale, established the library in this chapter-house. Painful as the story of destruction would be, the loss of it is deplorable. The saddest parts of history are often those of its keenest interest. There was but one other window of which the ancient glass remained complete to modern times, and of that not one scrap remains. The subject of that window was the *Blessed Trinity*. It had escaped the ravages of time and revolutions, but it so scandalised Canon, afterwards Bishop, Fowler that he obtained an order from the Chapter for its removal; and in the account he has given of his proceedings, which have a touch of the comic about them, in this grave dignitary scrambling up ladders and on hands and knees over the roof of the nave to reach the object of his animosity, he states plainly that he smashed it with his own hands, June 23, A.D. 1679.

There was a burst of enthusiasm in religious art in the fourteenth century; and a good illustration of it is given in the notice of Abbot Wygmore's life in Frocester's "Chronicle." John Wygmore was abbot from 1329 to 1337. He immediately preceded the abbots under whom the east window was erected and glazed. There must have been great artistic activity among the inmates of the abbey in his time; and the school of art he had formed, and the company of workmen he had about him, quite account for the works so marvellously completed in architecture and glass painting during the abbacy of his successors. Abbot Wygmore is described as "well skilled in mechanics and other arts, in which he very often worked himself; and he had also other artificers, excelling in various arts, and in mechanical works and in embroidery." That is to say, he was a practical architect, the head and chief among arts. Under his auspices, or more probably by him, the Perpendicular style was invented, Edward the Second's monument was designed and completed, the south transept finished, the choir screen, several chapels, and other works were built and adorned. He was, in short, an artist all over; and as glass painting was then, after architecture, the most extensive of all the arts employed in Mediæval churches, it is inevitable to infer that glass painters were members of that company which Abbot Frocester describes as "artificers excelling in various arts." I venture to attribute the execution, if not the design also, of the figure of Edward the Second to an Italian in that company. Two large paintings are recorded to have been executed in his time, for the abbot's chapel and the high altar, and it is well known that painters of such works, and the artists who polychromed the roofs and screens of churches and figure-painted the walls in distemper all over the country, were the same as those who made the designs for the so-called "glaziers" who painted them upon the glass. These men commonly travelled about in companies, as the masons did. Illuminators of MSS. and caligraphists were also roving geniuses; but as it is hardly necessary to add, arts were equally practised by the inmates of the religious houses—as by such men as Prior Goldstone, architect at Canterbury; Allen de Walsingham, who was just such another at Ely as Wygmore was at Gloucester; and William of Wykeham, Bishop of Winchester, and other such in England at this period. Much painted glass was imported from Germany and France during the fourteenth century; but this was not the case from inability of such companies of artists and artificers as the priors and abbots all over England had collected around them, but because of the craze for glass painting which existed in England at that time, and made the demand too great for the home supply.

Of all the buildings of this great abbey the Lady Chapel must have been the gem of greatest beauty, worthy of the motto employed elsewhere, "*Ut rosa flos florum sic domus ista domorum*"; with its walls and windows rich with sculpture and colours, and its altar reredos more beautiful than all. The glass in this Lady Chapel is of a character altogether different from that of the choir. The stonework of the windows consists of a repetition of similar panels, common to the architecture of the fifteenth and following century. Most of the windows still retain in the heads of those panels the upper parts of canopies in painted glass, which suggest their treatment to have been of single figures of saints, martyrs, and leading characters of church and sacred history. These have been all destroyed. Some idea may be formed of the injuries this cathedral has received within a short time ago, when I mention that I have learnt from a man still living that he remembered as a boy to have seen the floor of the eastern part of this lovely chapel strewn with glass and stones, and that I also learnt many years ago from a man, now no more, that the boys of the College School used to amuse themselves by smashing with stones the glass of the northern windows which bounded their playground. Another anecdote, though of a different character, affecting the loss of old glass, has been afforded to me from the acts of the Chapter, in which it is stated: "Whereas a quantity of painted glass has been lately stolen from the east window of the cathedral; ordered that a reward of fifty guineas be offered for the discovery and conviction of the offenders. June 1798." The east window of the Lady

Chapel is still very interesting, although glazed throughout with the mere relics of ruin. By careful study it is possible to picture to one's mind what it may have been. As we now see it, it is a rich kaleidoscope of heterogeneous pieces, scarcely a scrap of which remains in its original place except the glass in the three-foil heads of the panels. The character of these many pieces is so distinct that it is easy to sort those which originally belonged to this window from others in the choir and elsewhere. The stone framework of the east window consists of three rows of panels in the body of the window, and a few of various sizes in the head. If we take the uppermost row by way of illustration, we shall see that the glass in the heads of those panels clearly indicates the character of the subjects beneath them, and indeed the scheme of the entire window, namely, an alternation of open-air subjects, and single figures; the former being clearly shown by the blue sky with tops of towers rising against it, and the upper parts of the spears and standards and processional crosses carried by the figures in the subjects of the panels below. Many of the subjects are also shown by pieces of glass scattered about the window, such as the body of our Lord with hands bound in front, either for the subject of the *Ecce Homo* or the flagellation; another is the figure of Christ with His right hand opening His dress and showing the spear wound in His side. There are many beautiful female heads, tenderly drawn and full of expression; a fine figure of a bishop, and a group of heads of monks, forming the crowded background of some subject. Scarcely one, if any, of these are in their original positions. One of special interest is what I suppose to have been the principal figure in the window, namely, that of the Blessed Virgin in Glory. This figure is on the extreme right of the middle row of panels. The glass is broken, and filled in with mixed fragments of all sorts; but the outline of the figure is easily traced, especially by the remains of the golden aureole of rays which originally surrounded the entire figure even to below its feet. This figure does not belong to the panel which its remains now occupy; it is too tall for it; and the old glass still remaining in the three-foil head of the panel has nothing to do with it, consisting, as it does, of an open blue sky, with the tops of towers and spears rising against it. No panel in the window, except one, could conveniently hold that figure, with its golden aureole complete, and that is the long central panel in the head of the window—a place which the glorified figure of the Blessed Virgin might be expected to have occupied in this principal window of her chapel. The glass of this window was foreign. The painting is very refined, and, from the great expression conveyed by the figures, it must have been the work of real artists. If we remember the principal schools of this art on the neighbouring continent, from which much glass was at that date imported, I think that, taking the prevalent style of French art in glass at Rouen or Rheims, we might incline to attribute it to that origin; but the details of all the accessories are more of the advanced Flemish than the French school. Neither should we trace it to the Nuremberg and North German school, where the Albert Dürer type prevailed; but whether we look at the detail of ornament, the draperies, or the architectural accessories, I think we should be right in tracing that window to Flanders, and the school of Ghent or Bruges; and from one or other of those towns I believe it to have come.

These two east windows, ruins though they be, are in their way invaluable, and, like the lesser remains elsewhere, should not be touched. But the subject that is forced on our attention is as to what should be done with those that ruin has left empty. I can, shortly, only answer that question thus:—Every kind and style of art has a genius special to itself; and as each is the embodiment of the prevailing sentiment or talent of its time, the effect, wherever works of contemporaneous art are combined, is harmonious and beautiful, from the unity of spirit which pervades them. It does not require artistic knowledge, but it *does* require a refined sense, to perceive this. I believe it to be true that a congeniality of spirit does exist in all those fine arts which have sprung up side by side, and that a sympathy of relationship between them is the cause of an indescribable charm and beauty which the introduction of any foreign form or element would mar. It follows, therefore, that if glass, perfect in congenial style and work, could be found for these empty frames of Mediæval stonework, the result would be more satisfactory than if they were filled with designs in the style of Michael Angelo, Hogarth, Sir Joshua Reynolds, or a modern portrait painter. The whole question turns on the propriety or otherwise of reviving a style of former days; and to this I think that literary criticism has not been always just in a sweeping condemnation of it as mere servile mimicry. Alas! it may be, and in some cases it has been so; but it is by no means necessarily so. It is quite possible, and indeed not uncommon, for an artist to be so touched by the specialities of some particular style, and his sympathies so engaged by the harmony of its various arts, as to become thoroughly imbued with its spirit, and to make it all his own. If the literary critic could feel how irresistible the impulse of artistic genius could be, he would throw up his trade and take to the pencil or the palette, and learn by experience the sacredness of art and the tenderness of an artist's sympathies; and then he would possibly allow that an artist may make any style his own, according to the bent or purpose of his mind; and dismissing of



course all idea of weak composition or bad drawing, which were merely the misfortunes of early and ill-instructed times, such a man could work without reference to anything but his own spontaneous impulse, without cramp or hindrance; free as air and happy in the style of his adoption, whether sacred or secular, Classical, Mediæval, or modern, and he would translate into that the poetry of his soul.

### THE EARTHQUAKE AT CASAMICCIOLA.

THE committee appointed by the Minister of Public Works in Italy to consider the best mode of rebuilding the houses destroyed by the recent earthquake has sent in its report, to which is appended a complete return of the number of deaths and of houses destroyed. Out of the 4,300 inhabitants of Casamicciola itself, 1,784 were killed and 443 injured; while of the 672 houses, 537 were completely and 134 partially destroyed. Of the 1,800 inhabitants of Lacco Ameno, 146 were killed and 93 injured; and of the 389 houses, 269 were completely and 102 partially destroyed. Of the 6,800 inhabitants of Forio, 146 were killed and 98 injured; and of the 2,713 rooms (no separate return is made of houses), 1,344 were completely and 977 partially destroyed. Of the 2,000 inhabitants of Serrara, 28 were killed and 21 injured; and of the 1,159 rooms, 65 were completely and 973 partially destroyed. Of the 4,600 inhabitants of Barano, 10 were killed and as many more injured; and of the 2,693 rooms, 63 were completely and 1,430 partially destroyed. No loss of life occurred at Ischia itself; and altogether the earthquake occasioned 2,313 deaths, while 762 persons were injured. Of the 2,313 killed, 650 did not belong to the island, but of these only 54 were of foreign nationality.

### GLASGOW INSTITUTE OF ARCHITECTS.

A MEETING of the Glasgow Institute of Architects was held on January 23 for the purpose of considering the draft of a proposed Burgh Buildings Act. Mr. James Thomson, F.R.I.B.A., president of the Institute, was in the chair.

Mr. William Maclean, hon. secretary, read the correspondence with the Lord Advocate as to the proposed Building Act, in which his Lordship stated that he would be glad to receive a proof of the draft Act, and thereafter to receive a deputation from the Institute on the subject.

The President said they would doubtless remember that a deputation from the Glasgow Institute, consisting of Mr. John Honeyman, Mr. Campbell Douglas, and himself, waited on the Lord Advocate in London on June 29 last, to impress on his Lordship the Institute's views on the desirability of having a Building Act apart from the proposed Police Bill for Scotland. He having expressed a wish to have some of these proposed details more fully before him in writing, the draft Act now to be considered had been prepared by the council. Some months ago he convened a committee appointed by the council to consider the subject. Afterwards several meetings were held, and the matter was fully discussed. He thus procured some very valuable suggestions, which were embodied in the Bill now to be considered. He was glad to say that it had been endorsed unanimously by the council, and he hoped it would be adopted by the Institute with the same unanimity, especially as they were all cognisant of the cogent reasons that had been advanced first and last by the Institute for the reform being of the radical nature proposed, instead of trying to patch up and improve the present Acts. He was decidedly of opinion that the members of their profession were the proper parties for the framing of such an Act, and the Institute had taken up the matter solely *pro bono publico*, and it had done so alone, without alliance or understanding with other bodies interested in lands and buildings. They were alive to the fact that some gentlemen who had had great experience, as for instance Mr. Honeyman, went even further than this, and advocated that all the Building Acts throughout the country should be swept away, and that the Legislature should provide an Act applicable to all buildings throughout the United Kingdom. Undoubtedly this reform would be a desirable one, and in many respects a considerable boon to the public; but he was doubtful if the time had arrived yet when town councils and corporations were prepared to surrender their legislative powers to Imperial Parliament. They would for the present receive with thankfulness such an Act as the one proposed by the Institute, as it would very materially tend to remedy the evils they had over and over again alluded to. There were a few points in the Bill to which he would call special attention. In section 16 important regulations as to projections were suggested. In section 29 it was proposed to furnish to the Court a ground or block plan only. Section 33 contained provisions for the prevention of over-crowding. At present there were many more dwellings on each stair-landing allowed than the Institute aimed at having under this section. Sub-section 19 related to factory stairs, and was one that was a step in the

right direction, giving protection and means of escape to the workers in such buildings in case of fire.

On the motion of the President, seconded by Mr. Sellars, it was unanimously agreed to adopt the draft print of the proposed Building Act submitted to the Institute, and the secretary was instructed to forward a copy of it to the Lord Advocate.

On the motion of Mr. Sellars, seconded by Mr. W. F. McGibbon, the following were appointed as a deputation from the Institute to wait upon the Lord Advocate to give his Lordship any explanation he may desire, namely:—Messrs. James Thomson, president; Campbell Douglas and John Honeyman, past-presidents.

On the motion of Mr. David Thomson, seconded by Mr. Bromhead, a committee, consisting of the whole council and the past-presidents and vice-presidents, was appointed to take charge of the architectural examinations, to be held in Glasgow next month, of candidates desirous of qualifying for the associateship of the Royal Institute of British Architects—Mr. Campbell Douglas to be convener and Mr. T. L. Watson sub-convener.

On the motion of Mr. David Thomson, seconded by Mr. Landless, a vote of thanks was awarded to the President for the great time and attention he had bestowed in connection with the preparation of the draft Building Act.

### THE DECLINE OF ENGRAVING.

A LETTER from "A Line Engraver" has appeared commenting on the communication from the Fine Art Society. The writer says:—"No plant will flourish without nourishment. The large prints of the present day to a certain extent overshadow the smaller works of the end of the last and the beginning of the present centuries, which were the nursery and school of English line engraving. All the great line engravers from the time of Sharp and Woollett commenced their careers by working for the 'booksellers'—to wit, Cooke, Harrison, Bell, Bowyer, Boydell, Cadell, Suttaby, Longmans, &c., also G. Virtue & Fisher & Sons, and from the ability displayed in these productions, after Dodd, Thurston, Bunbury, Stothard, and Smirke, emerged such men as James Heath, Raimbach, Golding, Parker, W. Bromley, Anker Smith, J. H. Robinson, W. Finden, and, in landscape, G. and W. B. Cooke, Milton, Goodall, Middiman, Pye, W. R. Smith, J. T. Willmore, J. Cousen, and others. Now this class of work is nearly extinct; a book with high-class plates is very rare indeed! Thus the only employment for line engravers came from the book trade or private firms. The Government and schools have done nothing for engraving or engravers. George III. and his family were all great patrons of engraving. But let us turn our eyes to the Continent, and we find all the Governments deeply interested in the art of engraving, and liberally encouraging it—for instance, Paris, Vienna, Munich, Rome, St. Petersburg, and even the United States—and rewarding the skill of the engravers by medals of gold or silver, diplomas, &c. I do not understand, on the face of facts, how the Fine Art Society can recommend a youth to enter upon the pursuit of line engraving. The writer can have no idea of the intense application necessary to acquire the facility and knowledge of the use of the tools. As to the Copyright Act, I have always found it a stumbling-block. Large sums are demanded by artists for copyright in addition to the purchase of the picture, if the owner will not lend it, though I have always found owners very liberally inclined, 'but for the copyright,' towards engravers; therefore no engraver would venture to engrave and publish a plate on his own account, as, in a pecuniary point of view, he would only lose his time and money. So the engraver is obliged to work for the publisher, and, like the barrister, take what he can get and the best price for his labour. The engraver also is terribly at the mercy of the critic, who generally is unacquainted with the technical beauties of his work."

### THE INTERNATIONAL HEALTH EXHIBITION.

A MEMORANDUM prepared by the sub-committee on the Construction and Fittings of the Dwelling-house, has just been issued. The committee think it should be distinctly understood, with regard to all the classes in which are to be shown buildings, furniture, fittings, &c., that only such exhibits as have a distinct bearing upon health can be admitted. Specimens, therefore, illustrating building construction generally, the decoration of houses, or their furniture, cannot be admitted unless they are shown to have actual reference to the health of the inmates of the houses. It is desired to show not only models and designs for sanitary houses, but also, so far as possible, specimens showing their construction. It is desirable that those exhibitors who are prepared to erect specimens of actual buildings should, as far as possible, co-operate with other exhibitors who may be desirous of showing fittings or furniture for such buildings. The Executive will, as far as possible, facilitate such arrangements, but it will be well that the exhibitors should agree between themselves as to the manner in which such collective exhibits may be arranged. Under the



proper class may be included, in order to draw attention to existing defects, specimens of insanitary decoration, such as arsenical wall-papers, hangings, &c., so that the public may be taught what to avoid. Special interest would attach to any evidence of equally good effects being obtained by the use of harmless materials, and in many cases it may be desirable to show side by side, for purposes of comparison, papers, fabrics, &c., treated with poisonous colouring matters, and also with colouring matter of a harmless character. One of the classes includes all appliances for personal cleanliness, public and private baths, &c. It is hoped that a full display of these may be forthcoming. The Executive Council have had under consideration the question of fitting-up baths for actual use in the Exhibition, as was done in the Berlin Exhibition, but it has been decided that it would be sufficient to show baths completely fitted, without putting them into action.

The sub-committee on water supply and sanitation have prepared a memorandum on the exhibits which are sought for classes 21, 22, 23, and 27 of group 3, "The Dwelling." With a view to bringing before the public examples, not only of thoroughly good sanitary arrangements, but also of the defects existing in ordinary houses, the committee have, with the sanction of the Executive Council, undertaken to supervise the erection of two model dwellings in the grounds of the exhibition, one of which will show, as far as can be done on the limited scale, a house with good sanitary arrangements, while the other will show the usual defects. In the latter case, no attempt will be made to exaggerate the ordinary conditions; but the object will be to reproduce accurately a state of things unfortunately but too common. Besides these typical illustrations, the committee will be glad to receive from manufacturers whatever examples they may think proper to submit for exhibition of the articles indicated by the classification. It is to be borne in mind that in all cases the exhibits must have a distinct bearing upon health, and that architecture or building construction generally is outside the scope of the exhibition. The exigencies of space will not permit the executive of the exhibition to invite contributions illustrative of schemes for drainage, water supply, &c., applicable to towns or large districts, and it is therefore to be understood that the exhibits must be confined to domestic sanitation alone. The committee would impress upon exhibitors the desirability of, as far as possible, exhibiting their own manufactures only, not those of other makers; and also of restricting their exhibits to typical examples of their appliances, and of not sending more than a single example of each article. Indeed, the committee cannot undertake to find space for things which are substantially duplicates of one another. As the exhibition will be a place of popular resort, and is intended for the instruction of the general public rather than specialists, it will be desirable that exhibitors of sanitary wares should assist the committee in making such arrangements as will bring the articles which it is necessary to show before the notice of the public in a manner as agreeable as possible.

## LEGAL.

**Supreme Court of Judicature. Court of Appeal.—Jan. 28.**  
(Before the LORD CHANCELLOR, the LORD CHIEF JUSTICE OF ENGLAND, and LORD JUSTICE COTTON.)

HART v. HOBBS.

LIGHT AND AIR CASE.

This was an appeal by the plaintiff from the dismissal by Mr. Baron Pollock, sitting for one of the Judges of the Chancery Division during last year's Winter Circuit, of an action to restrain an alleged obstruction by the defendant of the access of light to the plaintiff's surgery. The plaintiff, who had died since the commencement of the action, early in 1882, was lessee and occupier of a house known as Stone's End House, Blackman Street, Borough, the back of which abuts on Montague Street, and he used for the purpose of his profession two rooms on the ground-floor facing Montague Street, one of which was used as a surgery and dispensary, the other as a consulting-room, and the rooms had, it was alleged, been so used for more than 20 years. The room used as surgery and dispensary is lighted by a window facing Montague Street, 4 feet above the ground and 3 feet 7 inches high, also by a skylight in the roof slanting towards Montague Street, and by a door with a fanlight above, also opening into Montague Street. The consulting-room is lighted by a window facing Montague Street. The land on the Montague Street side was until recently occupied by the old Queen's Bench Prison, the external wall of which was about 20 feet from the house and 32 feet high. The prison was pulled down in 1880, and in November 1881 the plaintiff discovered that the defendant was erecting extensive buildings, to be let out in lodgings, and carrying them as high as, if not higher than, the prison. The plaintiff complained that the walls of the defendant's new building would greatly interrupt the access of light to his surgery and consulting-room. An *interim* injunction had been obtained in January 1882, and the action was brought to trial for the purpose of obtaining a perpetual injunction and damages. The defendant alleged that the dispensary was lighted

wholly by a skylight, that the other room was not a surgery, but was only used as a waiting-room, that the skylight was obscured by paper and paint, and the window by bottles and other medical apparatus, and that the window of the consulting-room was obscured by a large case containing plants and by dark-coloured pictures, painted on glass, and suspended against the window-panes, so that the plaintiff did not care to get as much light as he could have. The defendant further stated that the frontage of the new building was set back about 9 feet further from the house than the old wall of the prison; and that the light on the whole was as good as formerly. The plaintiff, as already stated, had died since the commencement of the action, and the person who had purchased the business was not called as a witness. The deceased plaintiff's mother, who had lived in the house for many years, together with two or three professional witnesses, surveyors, gave evidence at the trial for the purpose of proving that the light had been materially diminished by the defendant's building operations. It was admitted, however, in cross-examination, that operations had been performed in the surgery since the alleged obstruction, though it was at the same time stated that there was a great difference in the light. At the trial of the action in February 1883, Mr. Baron Pollock being satisfied upon the plaintiff's evidence that no case of substantial interference with the access of light to the surgery had been established, and also that the letting value of the premises was not lessened, gave judgment for the defendant, and dismissed the plaintiff's action with costs. From this dismissal the plaintiff now appealed.

The Lord Chancellor was understood to say that the plaintiff had entirely failed to sustain the burden of proof which rested upon him, of showing that there had been a substantial privation of light sufficient to prevent the plaintiff from carrying on his accustomed business on the premises as beneficially as he had formerly done. Upon the evidence he could not differ from the conclusion at which the learned Baron had arrived, and the appeal, therefore, substantially failed. From what occurred, however, during the progress of the action, he thought that the action should not have been dismissed absolutely; and the order of the Court below must be varied to this extent, that upon the defendant undertaking not to raise his building any higher there would be no order except that the plaintiff should pay all costs incurred subsequent to the *interim* application for the removal of the buildings complained of, and also the costs of the appeal.

The Lord Chief Justice and Lord Justice Cotton concurred.

## ARCHÆOLOGY.

**Malcolm Canmore's Tower, Dunfermline.**—Mr. Hunt of Pittencrieff, Dunfermline, has arranged for the restoration of Malcolm Canmore's Tower. The tower is situated on the grounds of Pittencrieff, and about 150 yards to the west of the palace ruins, and has been in such a dilapidated state for many years back that strangers with difficulty could find out the site of the old royal residence, designated in some historical works "Dunfermline Castle." During the past year Mr. Hunt has greatly improved his property adjoining the palace—Crown property—and now the circular walls of the tower have been laid bare at every point, and on the top of the massive foundation a wall two feet in height has been built with the stones of the old palace fence. From the excavations there is every reason to believe that the building, though of a simple kind, has been a massive structure. Hewn stones were found during the excavations, which correspond in every particular with the palace ruins and the outer wall, which has just been replaced by a more modern fence. After the partial restoration of the tower has been effected, it is Mr. Hunt's intention to cover the walls with ivy, &c. Very little is known of the tower previous to 1069-70—the occasion of Malcolm's nuptials. It was here the King was married to Queen Margaret. The means that are being taken to preserve the once-castellated palace of Malcolm III. seem to be very effective.

## ART WORKMANSHIP.

**Stained Glass.**—Two stained glass windows have been recently put in Brayton Church, Selby, Yorkshire, the gift of Mrs. Smith, of Hambleton House, Selby. One, a window of two lights, has been erected "To the memory of William Thomas Smith, born December 21, 1850; died December 26, 1861," the subjects being *The Incredulity of St. Thomas* and *The Martyrdom of St. Stephen*. A three-light window at the east end of the south aisle represents *Our Lord appearing to His Disciples after the Resurrection*, under floriated canopies, with ornamental bases, having a twisted label with text, and inscription "To the memory of William Thomas Smith, born January 10, 1810; died December 18, 1882." The windows were executed by the firm of Messrs. Ward & Hughes, of Frith Street, Soho Square, London, who executed the other painted windows in the church.



**Stained Glass.**—The east window of St. John's Church, Paddington, has recently been filled with stained glass in the Late Perpendicular style. The window, which is a seven-light one, contains in the centre light two figures, namely, that of Our Lord occupying the upper panel, and that of David, as a shepherd, the lower panel. In the three lights on the left hand of the centre light two of the parables are represented—*The Good Samaritan* and *The Prodigal Son*; in the three lights on the right hand are two subjects, illustrating *Our Lord teaching from a Boat on the Seashore* and *The Miraculous Draught of Fishes*. The tracing contains figures of the twelve Apostles, angels, &c. The window was designed and executed by Messrs. Heaton, Butler & Bayne, of London, upon whom it reflects great credit. Mr. A. W. Blomfield, M.A., designed the new stonework and supervised the carrying out of the window.

### CHURCH BUILDING AND RESTORATION.

**London.**—The church of St. Helen, in North Kensington, near Wormwood Scrubs, has been consecrated. The site, which was given by Mr. St. Quentin, offered many difficulties, and in consequence the nave of the new church is nearly square, and the centre of the chancel does not range with the axis of the nave. The walls are of red brick with Bath stone dressings. The roof is supported by iron columns. There is a spacious crypt which will be used for parochial meetings. The architect is Mr. Henry Currey.

**Stretford.**—Plans have been prepared by Mr. G. T. Redmayne for the proposed mission church and chapel of ease for St. Matthew's parish church, Stretford. The site has been given by Sir Humphrey de Trafford, and building operations will commence at an early date. The design is Early English, and provision will be made for 280 sittings.

### NEW BUILDINGS.

**St. Paul's Mission Hall, Walworth, S.E.**—This hall, which is in connection with St. Paul's, Lorrimer Square, was opened on January 24. The building will seat about 800 adults, and has cost 2,400*l.*, including heating apparatus, gas fittings, reversible seats, wood-block floor, &c. The builders are Messrs. H. Burman & Sons, and the architects Messrs. Romaine Walker & Lannes, of 19 Buckingham Street, Adelphi, W.C.

**Royal Eye Hospital, Manchester.**—At a meeting of the subscribers, which was held on Tuesday, the Mayor of Manchester said that the committee invited plans from six architects whose experience they thought would best fit them to design a good hospital. It was pointed out that what was wanted was a good substantial building, with accommodation for 100 beds; that the committee did not wish to spend money on architectural display, but that the cost should be about 100*l.* per bed. The plans received varied very much in price, the highest being 34,000*l.* and the lowest 9,850*l.* As the latter plan was considered by the Board, as well as by an expert whom they employed, to contain all that they required, and as the tenders received from builders also agreed with the amount of the estimate, the work was entrusted to Messrs. Pennington & Bridgen, as architects, and Messrs. R. Neill & Son, as contractors. The latter had agreed to finish the building by the end of October. He was quite sure the hospital would be a credit to all concerned, as it contained all the requirements which modern science demanded, and all the comforts which the patients could desire. Objections had been raised to the site, but it was the best and cheapest available. It had also been said that the Board ought at any rate to have a receiving room in the middle of the city, but this could not be without incurring an expenditure which they did not feel justified in permitting. The actual cost of the site was a little more than 5,000*l.*, and it was anticipated that the whole cost of the new hospital, including land, buildings, and furniture, would not exceed the amount stated in the appeal which was issued to the public—i.e. from 15,000*l.* to 20,000*l.*, a result which could not have been obtained if a more costly site had been chosen.

### ENGINEERING WORKS.

**Glasgow Bridge.**—A report has been prepared by Messrs. Bell & Miller, at the desire of the Bridge Trustees, on the present condition of the Glasgow or Jamaica Bridge. The authors say:—In our report of December 20, 1880, we pointed out the serious fractures which had taken place in the arch-stones of all the arches. We have made a careful examination of these, and find that no change has taken place since that time, which confirms the opinion that these must have been made by some exceptionally heavy weight passing over the bridge at some former period. The wise restriction which was made by the trustees at that time to exceptionally heavy weights passing over the bridge, and limiting the weight to 12 tons upon any vehicle or lorry, has had the effect of arresting any further injury to the arches, and shows that they are still sufficiently strong for any traffic under that limit. We also carefully examined all the piers, and are happy to state that

there is not the slightest indication of any subsidence or fracture of any kind. It may therefore be inferred that, so long as the present conditions exist with relation to the depth of the river, the foundations are of sufficient stability for the traffic now passing over the bridge. We made a series of soundings and sections on the same lines as formerly, in order to ascertain what changes had taken place in the bed of the river. It will be recollected that in 1875 considerable scouring had taken place in the bed of the river immediately above the bridge, so much so as to raise apprehensions for the safety of the bridge in the event of this deepening action approaching the foundations. The soundings which we took in 1880 showed that a great change had taken place from the removal of the weir in the interval having brought down a vast deposit of *débris*, which raised the bed of the river to a great extent, and filled up the deep channels which were approaching dangerously near the bridge. The sections which we have now made do not differ greatly from those of 1880, except on the north side of the river, where a considerable deepening has taken place, which may have been partly caused by dredging for navigation purposes. However, there are no deep-water channels sufficiently near to affect the foundations of the bridge. Altogether, we consider the bridge to be quite secure at the present time.

### GENERAL.

**Mr. Collin Hunter**, landscape painter, has been elected an Associate of the Royal Academy.

**A Collection** of oil paintings and water-colour drawings, valued at 10,000*l.*, has been bequeathed to the town of Blackburn by the late Mrs. R. B. Dodgson. There are eighteen works in oils and thirty-six in water colours.

**The Castellani Collection** will be sold in Rome on March 15. It contains a great number of small terra-cotta figures of the Tanagra type, vases, and bronzes, Mr. C. T. Newton, C.B., will represent the British Museum at the sale.

**A Monument to the Late Dean Stanley** has been placed in Rugby Chapel. It is the work of Mr. J. E. Boehm, R.A., and consists of a recumbent figure of the late Dean clad in surplice and stole.

**Mr. George Tinworth** is engaged on a low relief in white marble to illustrate Mr. Edmund Gosse's poem, "The Sons of Cydippe."

**The Manchester Academy of Fine Arts** have selected Messrs. Bright Morris, W. Herbert Johnston, George Hayes, and William Artingstall to form the hanging committee for the spring exhibition, which will be open to private view on the 19th inst.

**A Cottage Hospital** is to be erected in Dunoon, from the designs of Mr. H. Higgins, of Glasgow.

**A Masonic Hall** is to be erected in Corn Exchange Street, Cambridge.

**Messrs. Horsfall & Williams**, of Halifax, have obtained first, second, and third places in the competition for the new schools of Lightcliffe.

**A Gallery** is to be added to the Carnegie Baths, Dunfermline, from the designs of Messrs. Campbell Douglas & Sellars.

**A Mechanics' Institute** is to be erected in Dumfries on the site of the old prison, if sufficient funds are forthcoming. The estimated cost is 15,000*l.*, for which sum it is expected that a hall to seat 1,700 people, a smaller hall, library, reading-room, conversation-room, &c., with residences for librarian and caretaker can be constructed.

**Three Surveyors of Ecclesiastical Dilapidations** have been appointed in the diocese of Peterborough, viz., Mr. H. N. Townsend, of Peterborough, for the archdeaconry of Northampton; Mr. C. A. Macaulay, of Leicester, for the archdeaconry of Leicester; and Mr. C. J. Traylen, of Stamford, for the archdeaconry of Oakham.

**The Breakwater of Port Erin**, Isle of Man, which was constructed at a cost of 70,000*l.*, was entirely swept away in the gale of Saturday last.

**Mr. Charles Steinitz**, of the London Parquetry Works, Grove Lane, Camberwell, has been appointed parquetry manufacturer to the Prince of Wales. It is just forty years since this, the first parquetry manufactory in England, was established under the patronage of the late Prince Consort.

**The Manchester Ship Canal Bill** has been found to comply with the Standing Orders, although the limits of the low-water channel were not shown on the plans. The total estimated cost of the works is 6,904,000*l.*, including 3,920,000*l.* for the canal works, 1,390,000*l.* for the improvement of the estuary, and 1,390,000*l.* for docks at Manchester and Warrington.

**An Episcopal Staff** has been presented to Bishop Eden for the use of the see of Moray and Ross. It was designed by Mr. A. Ross, architect. The shaft is of ebony, while the crook, the tabernacle crook below it, the foot, and some ornamental bands which encircle the staff at regular intervals, are of silver gilt. Within the crook itself, and entirely spanning it, there is a silver gilt cross of Celtic character, enriched with amethysts and topazes, and below the crook there is grouped around the shaft a series of five canopied niches, elaborately ornamented, containing figures of saints.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, FEBRUARY 2, 1884.

### TENDERS, ETC.

*\*\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*\*\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
"Contract Supplement to THE ARCHITECT."*

### EDITORIAL NOTICES.

*The authors of signed articles and papers read in public must necessarily be held responsible for their contents.*

*No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.*

*Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.*

### COMPETITIONS OPEN.

**ABERDEEN.**—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10s. 6d. to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

**BLOEMFONTEIN.**—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

**KNIGHTON.**—Feb. 21.—Plans are required for a Stone-built Workhouse for 120 Inmates. Mr. E. H. Deacon, Clerk to the Guardians, Knighton, Radnorshire.

**LEICESTER.**—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

**LONDON.**—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for

the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

**NEWCASTLE-ON-TYNE.**—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

**WIDNES.**—Mar. 20.—Designs are invited for Public Offices and Town Hall. Mr. J. T. Allen, Public Offices, Widnes.

### CONTRACTS OPEN.

**ADVIE.**—Feb. 6.—For Construction of Iron Lattice Girder Bridge. Mr. Barnett, C.E., Waterloo Station, Aberdeen.

**BACUP.**—Feb. 2.—For Building Chapel and School at Troughgate, Britannia. Messrs. Maxwell, Tuke & Hurst, Architects, 175 Lord Street, Southport.

**BANGOR.**—Feb. 4.—For Addition of South Aisle and other Works to St. James's Church. Mr. Henry Kennedy, Architect, Bangor, North Wales.

**BARNSELY.**—Feb. 16.—For Building House and Shop. Messrs. Dixon & Moxon, Architects, 5 Eastgate, Barnsley.

**BELFAST.**—Feb. 2.—For Building House and Premises. Mr. Edward J. Byrne, Architect, 4 Waring Street, Belfast.

**BELPER.**—Feb. 4.—For Extension of Cowhill Board School. Mr. George Eyre, Architect, Codnor, Derby.

**BRADFORD.**—Feb. 7.—For Building Warehouse, Leaven-  
thorpe Mills. Messrs. Milnes & France, Architects, 99 Swan Arcade, Bradford.

**BRUMBY.**—Feb. 20.—For Building Cemetery Chapel, Lodge, Walls, and Entrance-gates. Messrs. Bellamy & Hardy, Architects, Broadgate, Lincoln.

**BURNLEY.**—Feb. 2.—For Building Baptist Schools. Mr. H. Smith, Architect, 25 Nicholas Street, Burnley.

**BURSLER.**—Feb. 4.—For Building Spur Manufactory and Five Dwelling-houses. Mr. G. B. Ford, Architect, Burslem.

**COVENTRY.**—For Building House. Messrs. G. & I. Steane, Architects, 22 Little Park Street, Coventry.

**CIRENCESTER.**—Feb. 5.—For Construction of Brick Gas-holder Tank. Mr. T. Newbigging, C.E., 5 Norfolk Street, Manchester.

**DUKINFIELD.**—Feb. 4.—For Building Fireproof Mill. Messrs. Stott & Sons, Architects, Oldham.

**ECCLESFIELD.**—Feb. 9.—For Building Board School at Burncross. Messrs. Wilson & Masters, Architects, Hartshead Chambers, Sheffield.

**ELGIN.**—Feb. 2.—For Building House in Bishopsmill. Messrs. A. & W. Reid, Architects, Elgin.

**EWELME.**—Feb. 8.—For Completing House. Mr. J. S. Dodd, Architect, 6 Forbury, Reading.

**FAVERSHAM.**—For Building 120-quarter Malting with Ale Stores. Mr. R. Waite, Architect, Duffield, Derby.

**FELIXSTOWE.**—Feb. 5.—For Building Fourteen Houses. Mr. William Eade, Architect, Post Office Chambers, Ipswich.

**FORRES.**—Feb. 2.—For Building Coach Factory. Mr. J. Milne, Architect, Elgin and Forres.

**FORRES.**—Feb. 5.—For Building Dwelling-house. Mr. J. Milne, Architect, Elgin and Forres.

**FYLANDS JUNCTION.**—Feb. 6.—For Building House. Mr. William Bell, Architect, North-Eastern Railway Offices, Northgate, Darlington.

**GRAVESEND.**—Feb. 6.—For Relief Office and Alterations to Casual Wards. Mr. W. J. King, Clerk to the Guardians, 4 Berkeley Crescent, Gravesend.

**HANLEY.**—Feb. 8.—For Building Presbyterian Church. Mr. G. W. Bradford, Architect, Miles Bank Chambers, Hanley.

**HENDON.**—Feb. 15.—For Construction of Sewers. Mr. John Pollard, C.E., Hendon.

**KILLARNEY.**—Feb. 4.—For Execution of Works of Water Supply. Mr. Robert Denny, C.E., Tralee.

**LIANDUDNO.**—Feb. 2.—For Additions to Queen's Hotel. Mr. G. F. Felton, Architect, Estate Offices, Liandudno.

**LICHFIELD.**—Feb. 6.—For Alterations to Premises. Mr. James Wallis, Market Place, Lichfield.

**LOCHGILFLEHEAD.**—Feb. 2.—For Building Church. Mr. J. Honeyman, Architect, 140 Bath Street, Glasgow.

**LONDON.**—Feb. 14.—For Additions. The Horological Institute, Northampton Square, Clerkenwell.

**MARKET HARBOROUGH.**—Feb. 6.—For Building House. Mr. J. W. Wits, Architect, Market Harborough.

**MEXBOROUGH.**—Feb. 4.—For Construction of Iron Pipe Sewer (2,200 yards), with Manholes, Lampholes, Flushing Tanks, &c. Mr. George White, Engineer to the Local Board, Market Hall, Mexborough.

**MIRFIELD.**—Feb. 5.—For Construction of Loading Shed. Mr. J. H. Stafford, Hunt's Bank, Manchester.

**MOUNTAIN ASH.**—Feb. 3.—For Building 100 Workmen's Houses. Mr. Walter Bell, Merthyr Vale, Merthyr Tydfil.

**NATLAND.**—Feb. 11.—For Building Home. Mr. D. Brade, Architect, 5 Bridge Street, Kendal.

**NEWCASTLE-UNDER-LYME.**—Feb. 4.—For Building Post-Office. Mr. J. Pattison, Borough Surveyor, Newcastle-under-Lyme.

**NEWHEY.**—For Building Two Houses and Alterations to Union Buildings. Messrs. Butterworth & Duncan, Architects, 4 South Parade, Rochdale.

**NORTH SHIELDS.**—Feb. 8.—For Building Sunday Schools, &c. Mr. T. Southron, Architect, 70 King Street, South Shields.

**NOTTINGHAM.**—For Building Club House and Care-taker's Residence. Messrs. S. Dutton Walker, F.S.A., & J. Howitt, Architects, King John's Chambers, Bridlesmith-gate, Nottingham.

**OLDHAM.**—Feb. 4.—For Building Store. Messrs. Wild & Collins, Architects, 15 Clegg Street, Oldham.

**PARK LANE, W.**—Feb. 4.—For Building Block of Chambers and Stabling. Mr. A. Waterhouse, A.R.A., 20 New Cavendish Street, W.

**POOLE.**—Feb. 7.—For Pulling Down Houses and Building Nine Houses. Mr. W. A. Stone, New Street, Poole.

**RAMSBOTTOM.**—Feb. 6.—For Extension of Paper Mills. Messrs. Sellers & Hamilton, Architects, Union Chambers, Bury.

**RIBY.**—Feb. 4.—For Building Chapel. Mr. J. Thompson, Architect, Vine Cottage, New Market, Louth.

**RICHMOND.**—Feb. 7.—For Additions to Workhouse. Mr. A. J. Wood, 17 The Green, Richmond, Surrey.

**RIO DE JANEIRO.**—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

**SALFORD.**—Feb. 5.—For Building River Wall. Mr. J. B. McCallum, C.E., Municipal Offices, Blackburn.

**SALISBURY.**—Feb. 5.—For Taking-down Buildings and Erection of Police Cells. The Surveyor, Municipal Offices, Endless Street, Salisbury.

**SHAW.**—Feb. 5.—For Building Warehouse, Lyon Mill, Shaw.

**SOUTHAMPTON.**—Feb. 8.—For certain Alterations at Municipal Offices. Mr. W. B. G. Bennett, Borough Surveyor, Southampton.

**STALYBRIDGE.**—Feb. 4.—For Building Warehouse. Mr. J. H. Stafford, Hunt's Bank, Manchester.



STREETON.—Feb. 6.—For Reconstruction of Mill. Mr. S. Jackson, Architect, 33 Kirkgate, Bradford.

STOCKPORT.—Feb. 9.—For Taking Down and Re-erecting Iron Girder Bridge. The Borough Surveyor, St. Peter's Gate, Stockport.

STOKE-ON-TRENT.—Feb. 6.—For Boilers, Machinery, Fittings, &c., at Steam Laundry of Workhouse Hospital. The Master of the Workhouse, Stoke-on-Trent.

SUNDERLAND.—Feb. 5.—For Construction of Gasholder Tank. Messrs. T. & C. Hawksley, C.E., 30 Great George Street, Westminster.

TEBAY.—Feb. 2.—For Building Chapel and School. Mr. Robert Walker, Architect, Finkle Street, Kendal, and Windermere.

THWING.—Feb. 5.—For Building Board School at Thwing. Mr. J. Earnshaw, Architect, Bridlington Quay.

TREHERBERT.—Feb. 5.—For Building Chapel. Mr. J. Rees, Architect, Hillside House, Pentre, Rhondda.

WAKEFIELD.—Feb. 4.—For Building Four Houses and Shops. Mr. John Vaughan, Gaskell Villas, Thorne, Wakefield.

WALLASEY.—Feb. 14.—For Enlargement of New Brighton Pier. Mr. A. Dowson, C.E., 3 Great Queen Street, Westminster.

WHITBY.—Feb. 25.—For Building St. Hilda's Church. Mr. R. J. Johnson, Architect, 3 Arcade, Newcastle-on-Tyne.

YEovil.—Feb. 11.—For Construction of Brick Gasholder Tank. Mr. E. Howell, Gasworks, Yeovil.

## TENDERS.

## ABERDEEN.

For Premises for the Aberdeen Preserving Company, Limited, at Torry, Aberdeen. Messrs. ELLIS & WILSON, Architects. Quantities by Architects.

Grant, mason work.  
Johnston & Fullerton, carpenter and joiner work.

Maitland, plaster work.  
Roger & Baxter, plaster work.  
Whyte, painter and glazier work.  
Gunn & Elder, plumber and gasfitter work.  
Abernethy & Co., machinery, &c.

## ANCNUM.

For Building Police Station, Ancrem. Mr. JAMES C. WALKER, Architect, 2 U. E. Circus Place, Edinburgh. Quantities by Messrs. Lorimer & Fairbairn, Ord. Surveyors, 6A George Street, Edinburgh.

Inglis & Son, Hawick	£682	0	0
Herbertson, Galashiels	650	0	0
Turnbull, Jedburgh	623	11	0
Dickson & Son, Kelso	618	13	0
Bulman, jun., Kelso	617	0	0
BRUNTON, Jedburgh (accepted)	600	0	0
Steele, Greenlaw	584	10	0
Miller & Lambert, Hawick	575	0	0

## ARMLEY.

For Building Eight Houses, Armley. Mr. F. W. RHODES, Architect, Upper Wortley. Quantities by the Architect.

Oddy, New Wortley, bricklayer and mason.  
Stead, Upper Wortley, joiner.  
Smith, Leeds, slater.

For Draining Armley Moor for the Trustees. Mr. F. W. RHODES, Surveyor, Upper Wortley.  
Walker, Armley.

## BLACKHEATH.

For Rebuilding Premises, No. 28 Blackheath Road, for Mr. E. T. Bailey. Mr. A. H. KERSEY, Architect, 21 Finsbury Pavement, E.C.

Tyerman	£1,051	0	0
Burman	890	0	0
Best	814	0	0
A. & F. Smith	798	12	0
Holliday & Greenwood	757	0	0
Bush	749	0	0
T. & L. HOLLOWAY (accepted)	727	0	0

## CLEETHORPES.

For the Erection of Wesleyan Chapel and Schools, at Cleethorpes, Great Grimsby, Lincolnshire. Mr. CHAS. BELL, F.R.I.B.A., Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.

Hobson	£5,989	0	0
Mills	5,906	0	0
Spencer	5,678	0	0
Mashford	5,647	0	0
Holmes	5,095	0	0
Baines	5,000	0	0
Grant & Co.	4,983	0	0
Snowden	4,886	0	0
Fletcher	4,817	0	0
Thompson	4,400	0	0

## DUBLIN.

For the Erection of Public Baths and Washhouses in Shoe Lane, Townsend Street, Dublin.

Connolly	£2,639	0	0
HAMMOND & Co. (accepted)	2,625	1	6

## Plumbing.

Connolly	1,212	0	0
HAMMOND & Co. (accepted)	1,032	14	0

## DOLGELLY.

For Building Board School for 145 Children, Dolgelly.

Accepted Tenders.  
James, mason.  
Morris, joiner.  
Williams & Jones, plasterer.  
£526 0 0

## ESHOLT.

For the Erection of a Villa Residence, Otley Road, Esholt, near Bradford. Mr. R. F. ROGERSON, Architect and Surveyor, Brighouse.

## Masons.

Obank & Co., Idle, near Bradford	£290	0	0
North & Sons, Idle, near Bradford	249	0	0
Baxter & Whitfield, Idle, near Bradford	244	15	0
CORDINGLEY, Thackley, Idle, near Bradford (accepted)	240	0	0

## Joiners.

Obank & Co., Idle, near Bradford	£173	0	0
Taylor & Sons, Yeadon, near Bradford	154	0	0
Cryer Bros., Shipley, near Bradford	149	10	0
DEACON, Shipley, near Bradford (accepted)	149	10	0

## Plumbers and Glaziers.

Brook, Heckmondwike	£70	10	0
LAWSON, Brighouse (accepted)	60	0	0
Rushworth, jun., Shipley, near Bradford	59	10	0
Lockwood, Guiseley	54	13	5

## Plasterers.

Sugden, Manningham, near Bradford	£44	0	0
Laycock, sen., Bradford	38	15	0
Stocks & Bates, Bradford	38	5	0
A. & S. WHEATER, Calverley, near Leeds (accepted)	37	0	0

## Slaters.

SMITHIES, Bradford (accepted)	£36	10	0
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## For all the Works.

Obank & Co., Idle, near Bradford	£610	0	0
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## GREAT BENTLEY.

For Building School and Chapel-keeper's House, Great Bentley. Mr. F. EVELYN MORRIS, Architect, Colchester.

Gillingham & Co., Clacton-on-Sea	£615	0	0
Chambers, Colchester	610	0	0
Eade, Lenden	599	0	0
Everett & Son, Colchester	569	0	0
Clarke & Son, Great Bentley	533	10	0
Oldridge, Colchester	527	0	0
Smith, Wyvenhoe	504	0	0
Diss, West Bergholt	500	0	0
AMBROSE, Colchester (accepted)	466	12	0

## HOVE.

For Construction of Sea Wall, &c., Hove.

Budden & Co., London	£38,639	12	7
Webster, London	33,723	0	0
Harrison, Brighton	30,966	0	0
Chappell, Pimlico	29,861	0	0
Dickinson, London	27,315	0	0
Doherty & Co., Maryport	27,261	0	0
M'Crea & M'Farlane, Westminster	26,659	12	9
Lawson, Glasgow	26,272	4	10
Cheesman & Co., Brighton	25,904	0	0
Lee & Sons, London	25,720	0	0
Marshall, Brighton	25,671	4	4
Longley, Crawley and Brighton	25,189	0	0
HILL & Co., Gosport and London (accepted)	23,946	0	0
Taylor & Sharpe, London	23,000	0	0
Hill Bros., High Wycombe	20,948	11	4

## INVERNESS.

For Works at the Harbour, Inverness.

M'DONALD, Hilton (accepted)	£3,670	15	6
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## LONDON.

For the Erection of a Mausoleum at Hammersmith Cemetery for Mr. G. Young. Mr. HUGH ROUMIEU GOUGH, Architect, 6 Queen Anne's Gate.

Ashton & Green	£520	0	0
Belham & Co.	435	0	0
CHAMBERLIN BROS. (accepted)	395	0	0

For Alterations and Repairs at The Corner Pin, St. Martin's Lane, W.C., for Mr. C. Deakin. Mr. ARTHUR W. SAVILLE, Architect. Quantities supplied.

## General Work.

ROYAL (accepted)	£345	0	0
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## Plasterers' Work.

Ruse	54	0	0
Watts & Co.	48	7	0

For Alterations at the Albion Hotel, Ludgate Circus, E.C., for Mr. T. Parker. Mr. H. I. NEWTON, Architect.

Royal	£635	0	0
Canning & Mullings	605	0	0
Beale	590	0	0
Mills	580	0	0
Godden	575	0	0
COOK (accepted)	571	0	0

For Alteration to the Canterbury Theatre of Varieties. Mr. FRANK MATCHAM, Architect.

Dove Bros	£2,105	0	0
Patman & Fotheringham	2,028	0	0
Wall Bros.	2,025	0	0
Bangs	1,982	0	0
Patrick & Son	1,969	0	0
Shurmur	1,710	0	0
Ford & Everett	1,585	0	0

For Re-erection of Premises in Copthall Court, Throgmorton Street, E.C., for Mr. C. J. Durant. Mr. E. A. GRUNING, Architect. Quantities by Messrs. H. Blackwell and R. Griggs.

Holland & Hannen	£17,463	0	0
Clarke & Bracey	17,350	0	0
Colls & Sons	16,400	0	0
Kirk & Randall	16,238	0	0
Lawrence & Sons	15,889	0	0
Brass	15,792	0	0
Nightingale	15,772	0	0
MOWLEM & Co. (accepted)	15,590	0	0

## LONDON—continued.

For the Erection of the Superstructure of Cannon Street Buildings, Cannon Street and Abchurch Lane, E.C., for Messrs. B. Perkins & Son. Mr. GEO. SHERRIN, Architect. Quantities by Messrs. Franklyn & Andrews.

Corder	£42,840	0	0
Lovatt	39,870	0	0
Greenwood	37,733	0	0
Rider & Son	37,660	0	0
Dove Bros.	36,595	0	0
Lawrence & Son	36,512	0	0
Bywater	36,337	0	0
Ashby & Horner	36,270	0	0
Holland & Hannen	35,843	0	0
Perry & Co.	35,808	0	0
Peto Bros.	35,741	0	0
Ashby Bros.	35,528	0	0
Brass	35,333	0	0
Kirk & Randall	33,332	0	0
Chappell	32,884	0	0

The basement and sub-basement have been carried out by Messrs. Holland & Hannen.

For Building Board School, Colls Road, Peckham. Mr. E. R. ROBSON, Architect.

Turtle & Appleton	£12,604	0	0
Sheppard	12,318	0	0
Tongue	12,280	0	0
Grover	12,267	0	0
Scrivener	12,250	0	0
Marsland	12,247	0	0
Patman & Fotheringham	12,212	0	0
Lathley	12,200	0	0
Brass	12,194	0	0
Bangs	12,190	0	0
Kirk & Randall	12,147	0	0
Hart	12,140	0	0
Wall	12,090	0	0
Wall Bros.	12,085	0	0
Downs	11,987	0	0
Shurmur	11,970	0	0
Stimpson	11,910	0	0
Smith & Son	11,764	0	0
Jerrard	11,689	0	0
Johnson	11,428	0	0

For Building Board School, Trafalgar Square, Stepney. Mr. E. R. ROBSON, Architect.

Harris & Wardrop	£15,550	0	0
Scrivener	14,940	0	0
Bangs	14,899	0	0
Patman & Fotheringham	14,765	0	0
Boyce	14,750	0	0
Johnson	14,730	0	0
Wall	14,621	0	0
Cox	14,499	0	0
Kirk & Randall	14,470	0	0
Atherton & Latta	14,300	0	0
Perry & Co.	14,157	0	0
Smith & Son	14,154	0	0
Bras	14,134	0	0
Williams & Son	14,111	0	0
Jerrard	13,989	0	0
Wall Bros.	13,934	0	0
Gentry	13,917	0	0
F. & F. J. Wood	13,669	0	0
Shurmur	13,590	0	0

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Sharpe	£7,500	0	0
Garlick	6,900	0	0
Foster & Dixie	5,000	0	0
Harris & Wardrop	4,994	0	0
Wood	4,829	0	0
Blow	4,700	0	0
Stafford	4,659	0	0
King & Son	4,587	0	0
Scharien & Williams	4,432	0	0
Perry & Co.	4,429	0	0
Parker	4,330	0	0
Ford & Everett	4,300	0	0
Hack	4,299	0	0
Outhwaite	4,193	0	0
Marriage	4,150	0	0
Jackson & Todd	4,090	0	0
Bolding	4,087	0	0
Dye	4,035	0	0
Shurmur	3,960	0	0
Gibbons	3,950	0	0
Howell & Son	3,923	0	0
Garrard	3,879	0	0
White	3,848	0	0

For the Erection of a Block of Buildings for Aged and Infirm Inmates on the Cook's Terrace Site, adjoining the Workhouse, for the Guardians of the Poor of the Parish of St. Pancras. Quantities by Messrs. Sandall, Corderoy, and Mr. W. T. Farthing. Mr. H. H. BRIDGMAN, F.R.I.B.A., Architect, 42 Poultry, E.C.

Hart, Great Dover Street	£36,852	0	0
Longmire & Burge, St. Pancras	34,990	0	0
Shaw, Westminster	34,335	0	0
Higgs & Hill, Lambeth	34,260	0	0
Pink, Gray's Inn Road	34,085	0	0
Joselyne, Borough	33,990	0	0
Chappell, Pimlico	33,662	0	0
Lucas & Son, Kensington	33,227	0	0
Mowlem & Co., Westminster	32,945	0	0
Steed Bros., St. Pancras	32,898	0	0
Perry & Co., Bow	32,848	0	0
Nightingale, Lambeth	32,725	0	0
Jones, St. Pancras	32,634	0	0
Howell & Sons, Lambeth	32,550	0	0
Killingback, St. Pancras	32,297	0	0
Boyce, Hackney	32,140	0	0
Lambie, St. Pancras	32,000	0	0
Foster & Dixie, Rugby	31,999	0	0
Scrivener & Co., St. Pancras	31,981	0	0
Woodward, Finsbury	31,645	0	0
Shurmur, Clapton	31,590	0	0
J. & T. Greenwood, City	31,573	0	0
Manley, St. Pancras	31,327	0	0
Wall Bros., St. Pancras	30,973	0	0
Kirk & Randall, Woolwich	30,720	0	0
Brass, City	30,597	0	0
LAWRENCE & SON, City Road *	30,448	0	0

\* Accepted, subject to references, &c.



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Sargeant . . . . . 293 0 0  
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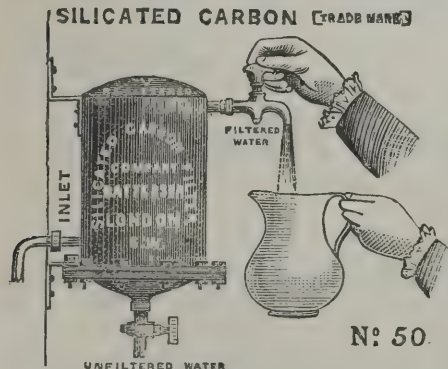
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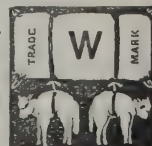
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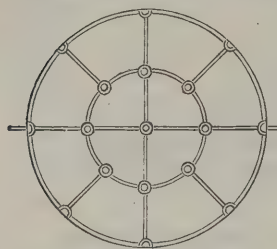
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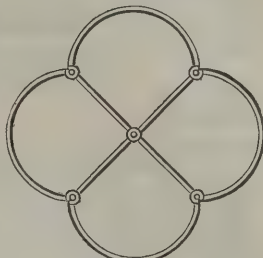
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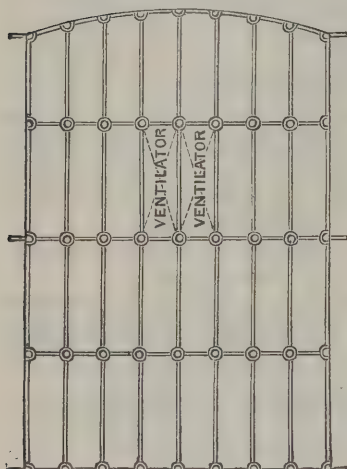
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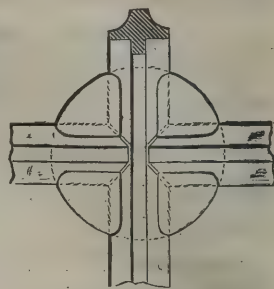
CLOSE BAR SASH (obviating use of Window Guards.)



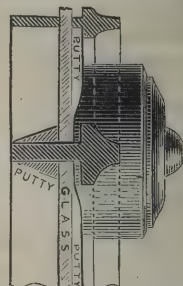
ORDINARY WAREHOUSE AND SCHOOL SASHES.



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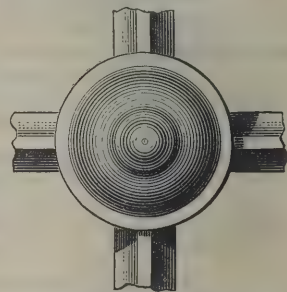


Back view of Boss, full size.

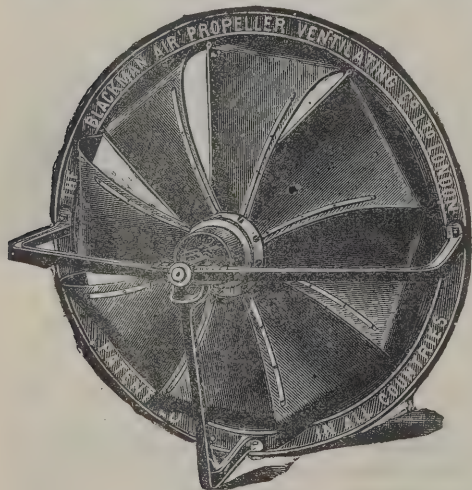


Section through Boss, full size.

These can be glazed flat, like ordinary wooden sashes, without the corners of the panes being clipped off.



Front view of Boss, full size. Obscuring no appreciable light.

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# The Architect.

## THE ROYAL GOLD MEDAL OF THE INSTITUTE OF ARCHITECTS.



R. BUTTERFIELD is to be, if all goes well, the Royal Gold Medallist for 1884; and no one need have any objection to congratulate him, as a representative artist, upon the honour which his nomination by the Council confers upon him. As everything requires a little explanation from time to time, we may perhaps as well explain that the Royal Gold Medal of Architecture is a badge of distinction which Her Majesty QUEEN VICTORIA, at an early period of her beneficent reign, was pleased, on the persuasion of the late Earl DE GREY, then the permanent and highly useful President of the Institute of Architects, to place at the disposal of the Institute yearly, for bestowal upon an architect or architectural author, native or foreign, who might be deemed worthy of the honour. It has always been awarded with due consideration for a high standard. At first it was supposed by some to be intended as a special prize for newcomers in the field of architectural popularity, and there is in existence somewhere, if we mistake not, one application at least which was sent in by the writer of a book—of course one of the highest order—requesting that his claims might be duly weighed as a candidate for the reception of it; but the leaders of that day at once declared in favour of its being made, if possible, the very supreme distinction of the profession, and, with one or two more or less pardonable exceptions, which serve rather to emphasise the rule otherwise observed, the list of medallists, now of considerable length, exhibits the names of those only, both at home and abroad, who are recognisable as princes in architectural art and letters.

It is to this most honourable company that Mr. BUTTERFIELD is now proposed to be added. The first step is of course all that has yet been taken; the Council of the Institute has proposed his name to the general body for approval. Our readers may not have all forgotten that a few years ago Mr. RUSKIN was so nominated, and rejected the nomination with not a little disdain. "Was this a time," he exclaimed, after his manner, "to be giving and receiving medals?" Certainly not; and so Mr. STREET had it in his stead, not even thinking it worth his while to regard the circumstance as of any moment that he was receiving it, so far as matter of form went, on literary and not artistic grounds; it being the turn of literature that year to take it. Since that time, however, the Council have adopted the precautionary measure of inquiring of their nominee beforehand whether he will accept the medal; a course which surely need scarcely be too long pursued, in view of the fact that none but a RUSKIN has ever refused it, so that no other precaution seems really to be needed than the simple avoidance, advisable on many other accounts, of transcendentalists as nominees. Poor BURGESS once amused and scandalised a meeting of the Institute by suggesting as a "happy thought" that the medal might be "shot for by the Artists' Corps;" but if he himself had lived a little longer, eccentric as he doubtless was in many ways, not only would he have been offered the honour, but he would have rejoicingly accepted it.

It is a very curious circumstance that Mr. BUTTERFIELD has been twice nominated by the Council for this same medal—in days now somewhat remote—and twice rejected by the general body. On one occasion Sir DIGBY WYATT was substituted, and on the other Sir JAMES PENNITHORNE. The reason for this was easily understood at the time. It was when the High Church school of architects, in which Mr. BUTTERFIELD was then a more conspicuous standard-bearer than now, although never aggressive like some of his colleagues, was viewed with widespread distrust. Mr. SYDNEY SMIRKE, for instance, was drawn from his comparative retirement to vote, and even to make a somewhat heated speech, against him. Mr. STREET, as another example, was stupendously offended at his rejection. It is to the credit of the rejected nominee of that day that he makes no objection to be nominated again, at

a time when he is a less prominent partisan, and when his partisanship is of far less importance. It is equally to the credit of the Council, perhaps, that in such circumstances they should revert to his claims.

Artistically we regard Mr. BUTTERFIELD as being well worthy of the honour. As a representative of individualism in church art, his merits are as unquestionable as his modesty has been praiseworthy. He is not even a member of the Institute. Perhaps the phase of architecture to which he has so long and persistently devoted his great powers of characteristic design may not much longer retain its hold upon the English public; but, as we have often been proud to say in *The Architect*, it has done its work well for England, and can never be overlooked in history for many ages to come.

## FRENCH ARCHITECTURAL ORGANISATION.

THE paper read on Monday evening at the Institute by Mr. W. H. WHITE, the present working secretary of that body, although it attracted but a small audience, and scarcely evoked anything like enthusiasm (except in respect of an occasional trick of humour, which is peculiar to the author), no doubt acquired a much greater importance when commented upon, or rather followed up, by the suggestive remarks of Mr. PHÉNÉ SPIERS, Mr. CATES, and Mr. ROBINS; and we are still more hopeful that good may come out of it when we observe that an adjourned discussion of the collateral questions thus raised was unanimously decreed by the meeting. Adjourned discussions, it is true, are not generally fortunate at the Institute. Perhaps it may be because, as librarians tell us, we live in a frivolous age; but at any rate the audiences on such occasions are too frequently quite inadequate, and the speeches rendered rather devoid of liveliness thereby. But it may be different in the present case, and we hope it will.

In the article of organisation it is well known that our smart neighbours across the Channel are beyond compare. It does not appear that a Frenchman on foreign ground is as a rule so happy in this respect, but on his own soil his arrangements are perfect. Not only so, but his native love of display and unflinching self-consciousness and self-confidence seem to have the effect of stimulating him to administrative exertion where a Teuton, or even a Latin of any other family, would be rendered less triumphant than ridiculous. Perhaps he requires, as part of the play, that he shall have Frenchmen to command and French affairs to administer, other people and other people's affairs only producing a waste of his peculiar energy as if in flogging dead horses. At any rate, there are still a thousand and one things, of great importance and of small, in which we are compelled to acknowledge every day that "they do these things better in France," in one sense or another of the language.

Amongst the rest, the organisation of artistic culture and artistic dignity in respect of architecture, as compared or contrasted with the same in England, must be acknowledged to be of a signally ambitious order. The "higher education," as the phrase now goes, of professional architects in France, is a thing of mere wonder to us. The official eminence, also, of leading practitioners is no less astonishing. The typical career of a first-class architectural designer is to be traced in this way. As a boy he has made his mark in some local free school of design. He reaches Paris, and is taken into the great metropolitan school, the instruction being still at the expense of the State. He enters a private *atelier* as well, but this does not cost much. He competes for prizes—prizes of mere honour and glory—continually. He is getting into manhood, and in England might be already *paterfamilias*, when at length he wins the *Grand Prix*, and is sent at the public expense as a *pensionnaire* to Rome. There he enters upon a fresh course of study, and pursues for several years the contemplation of the antique. At length, when he returns to France, now actually thirty or five-and-thirty years of age, he is rewarded with a subordinate salaried situation on some of the building operations of the Government, and then he begins one more course of study. Having acquired during the past twenty years the art or knack of designing the superficiality of architecture *à la mode*, he now has to learn that which we in England call the practical part of it. At what advanced age he becomes, after all these preliminary stages of grubhood, a perfect *imago*, who may take flight on his own wings into the free



space of "independent practice," is quite a matter of accident ; and indeed it is often the case, apparently, that he aspires to nothing at all in the world of business beyond promotion in the supervisorship of Government buildings—having most emphatically "only one job on his hands at a time" (as some of our church architects used to say), and possibly only that one job for the whole of his life. Meanwhile, as he attains to somewhat advanced years, he arrives at very great honour, which is signified in the usual way by academical titles, enrolment in the Légion d'Honneur, and membership of the "Institut" itself—the pride and paragon in French estimation of all development of intellectual organisation. When he dies—probably in the lonely *appartement* of a bachelor—he has speeches delivered over his grave, lauding his merits to the skies of Père-la-Chaise as the designer of a single edifice, and the wearer of a dozen decorations. May he rest in peace !

But whether a prosperous architectural practitioner in England, supporting by private enterprise a large and happy household, will envy all this, and be anxious to surrender what he has for what he has not, we dare not ask. Academical culture is no doubt a grand result, and academical dignity oftentimes a noble reward ; and we could take in England, it need not be denied, a good deal more into the profession of architects of culture and dignity both ; but one cannot help thinking the success of a clever French architect in England would be a much better thing, and that of a clever English architect in France a good deal worse, if they were to exchange places, the one for the sake of glory, and the other for that of the more substantial fare upon which England is colonising the world.

### THE INCIDENCE OF BUILDING RISKS.

[BY A CORRESPONDENT.]

THIS subject, which is commented upon in the first article of *The Architect* of last week in connection with a paper read by Mr. RICKMAN at the Surveyors' Institution on January 28, is worthy of further consideration, as there appears to be much misapprehension thereon. In these remarks, I propose to restrict the consideration of risks to the case of a contract between a building owner and a builder, when there is to be, as defined by Mr. RICKMAN in his paper (c) "A fixed sum for the whole obtained from quantities furnished by a measuring surveyor." I start with the postulate that in every building contract there must be risks ; and my contention is that these risks, with certain defined exceptions, should fall on the builder, he receiving his own valuation for them and having them all placed before him before he states the amount of his tender. A building owner, as a rule, knows little or nothing of the risks to be encountered in the erection of a building. In the exceptional case of a building speculator who makes it his business to build, he usually knows too much, and is the worst kind of employer a builder can have. But in an ordinary case a building owner only knows that he wants a certain building, and is prepared to pay a certain price for it. If he is wise he employs an architect, not, I think, as Mr. RICKMAN says, "to minimise the risks for him," but to set forth by drawings and specification what is required to be done, including the risks contingent on doing it. The architect, if he is wise, in the interest of the building owner employs a surveyor to prepare bills of quantities, setting forth all the materials and labour required for the efficient carrying out of the work, and also setting forth any risks, beyond the ordinary risks, which the builder may have to encounter. For there are two classes of risks : (1) ordinary risks, or those "which go without saying ;" and (2) those which may be special to the work ; and it is to the latter of these that the attention of the builder need be drawn in preparing the bills of quantities. These bills of quantities are placed before builders to enable them to prepare their estimates ; and assuming them to be competent men they exercise their discretion in pricing out each item in the bills, and by so doing obtain a total for their estimate. If a builder finds that from any cause he objects to take the risks which will be imposed upon him, he may decline to tender, and the building owner loses the advantage of that builder's experience as to the value of the work. There have been cases in which, from the risks being considered too onerous, all the builders invited have declined to tender, and the conditions have had to be remodelled. Following the schedule of risks given by Mr.

RICKMAN as considered to attach to builders, the following may be taken as ordinary or necessary risks, namely, (1) changes in the price of labour ; (2) alteration in the efficiency of labour ; (3) changes in price of materials ; (11) the idiosyncrasies of architects ; and (13) the whims of clerks of works. All these items may involve serious risks, but they must be taken by the builder if he thinks fit to contract for the work. As to (1) changes in the price of labour, of late years this has been almost always against the builder, rates of labour rising and very rarely falling. The builder making his estimates has to look ahead and forecast the state of the labour market. If he sees a prospect of a rise in the market during the time allowed for the execution of the work, he should add such a percentage as he considers will cover him from loss by such a risk. This I call "insurance against risk." As a man of business the builder should calculate this risk as surely as he prices out any definite item in the existing rates of labour and materials. No builder should undertake any risk without considering that he has the equivalent for such risk included in his estimate ; the building owner must pay for a builder taking such risk. Had he employed his own labour at weekly wages the risk would have fallen on him ; and if a rise came, he would have to increase his payments. So in a contract, if the rise does not come, the builder puts the sum he has allowed into his pocket. He has fairly earned it, for he took the risk, and it is an unsound principle in business, to use a sporting term, for a man to stand to be shot at. If the rise comes later than the builder expected, he saves part of the sum provided. If it comes sooner or to a greater extent than he expected, he loses more than he had provided, which loss goes to the diminution or entire swallowing up of the whole estimated profit on the work. But this is one of the chances of war, which must be encountered if business is to be carried on in the way it is conducted in these days. Now there are certain special cases in which the anticipated rise in the price of labour is the essential element of difference in the estimates received from the builders. A notable instance occurred in the case of the estimates for building the New Law Courts. Prudent men forecasted the coming rise in the price of labour, and loaded their estimates accordingly. They were, so to speak, out of the running ; but surely it was better to lose the work than to lose the money which had to be paid in consequence of the rise in the price of labour.

The second ordinary risk is "the alterations in the efficiency of labour." This may be dismissed briefly. Builders have long complained that for the increased price they have to pay for labour they receive less work than they obtained before paying the rise. This may be true, and if true is a fact to be lamented ; but in an ordinary state of trade a builder with capable foremen can fairly estimate the return of work he will get for his money, and it may be that by the use of improved machinery he may be able (I do not say that he will be) to economise on the original estimated cost.

The third ordinary risk is "changes in price of materials." This in a large work may be an immense risk to the builder. The price of labour does not often change ; the prices of materials are constantly varying. It would be an interesting occupation to prepare tables showing by diagrams the varying prices of the principal materials used in building works during the last thirty years. Take such items as bricks, lead, and iron. The prices of these articles will often vary during the execution of a large work to an extent far exceeding any ordinary percentage of profit which may be included in an estimate. Of course the price of materials often fall as well as rise. The builder, in making his estimate, has eminently to use his judgment as to the probable variations in prices of materials. Two courses are open to him. He may make provisional contracts before he sends in his tender, and more definite ones immediately on its being accepted ; or he may run the risk of the market and be his own insurer. In the first case he is comparatively safe ; in the second, he risks a larger gain or loss as events prove, but he takes a large responsibility on himself.

The ordinary risk (No. 11 in Mr. RICKMAN's table), "the idiosyncrasies of architects," is a real one in its real sense, and the long word used a very proper one as expressing "that constitution of body or mind which is peculiar to an individual and which more or less affects his character and actions" (WEBSTER). A builder usually knows the architect with whom he has to deal, and regulates his prices accordingly. How



often do we hear such an expression as "It is worth 5 per cent. more to do work for an architect (say A) than for an ordinary architect." This arises from A's idiosyncrasy. An apt illustration may be given in the various tenders for works given, not many years ago, to a well-known public board, presided over by an able chief, who did not directly superintend works, but constituted in himself a court of appeal, and assisting him three gentlemen, who directly superintended the works in separate districts. The same class of work had to be done; the same general specifications were used, but it was found that tenders for works under the three superintendents (call them X Y Z) varied fully to the extent of 10 per cent., tenders for work under X being 10 per cent. higher than for similar work under Z, while for those under Y the tenders were intermediate, and more than that, the contractors under X could rarely make both ends meet, while those working under Z made a fair profit. Such contrasts of "idiosyncrasies" fortunately are not often to be found, but they must be risked.

Mr. RICKMAN has, however, surely used the wrong word in writing of the "idiosyncrasies of architects as shown in their explanation of their own terms." Grant a little margin to an architect in explaining something that may be ambiguous, still that which is written is written, and should be the contract, and beyond the idiosyncrasy of an architect to explain away the plain meaning of plain words, unless the builder has been foolish enough to submit everything, plain words and all, to the sole decision of the architect.

But, as a rule, architects write uncommonly plain words in the conditions of a contract, and it is the builders and arbitrators who try to wrest these plain words to mean something quite other than the architect in his simplicity had intended. It is not very long since that an arbitrator laughed at the plain words in a contract, that the builder should carry out the works according to the detail drawings (which were not made at the time the contract was signed). It did not occur to his judicial mind that these detail drawings were but drawings at large of the contract drawings which the builder had signed, and that if the builder disputed his liability to carry out any one of the detail drawings, he had his remedy (1) by declining to execute such work as under his contract; and (2) by the arbitration clause which formed part of the contract. But certainly the real idiosyncrasies of architects are a real risk to builders, and so are (13) the whims of clerks of works, many of them very respectable men, but sometimes carrying out "the letter which killeth" alike to the detriment of the building owner and the pecuniary loss of the builder. It remains to treat of the special risks to the builder as distinguished from ordinary risks.

All the ordinary risks hitherto mentioned must necessarily occur, more or less, in every building contract; but each work may have its special risks, and following the schedule given by Mr. RICKMAN, we find (4) "Difficulties arising from having to obtain special materials." The obtaining special materials gives increased trouble rather than risk. If an architect introduces an unknown material into his specifications, it is his duty to give such information to the builders as to the means of obtaining this material, that they may be able to ascertain its cost. If he fails to do this, the building owner will probably suffer. A prudent builder will not tender for work he cannot fairly price, or in common parlance, he will decline to buy a pig in a poke.

Special risk (5) is called "The state of the bottom obtainable for building, and the consequent extent of the foundations of the proposed structure." The real risk a builder has to encounter as to foundations is not set forth in this paragraph, viz., the unexpected difficulties which may be met with in carrying out the works shown on the drawings and specification, i.e., "the getting to the bottom." The state of the bottom, and consequent extent of foundations, is not a risk which an intelligent architect would seek to impose on a builder; it is not a risk which a sane builder would take, except he covered himself far beyond the probable increased expense he might have to incur. The state of the bottom is as clearly a contingency of the estate, and therefore falling on the building owner, as the nature of the strata, whether it be sand or rock; the nature of the site, whether accessible, and therefore advantageous, or difficult of access, and therefore expensive for building. The state of the bottom may therefore be taken from the risks incident to the builder and added to the risks falling on the building owner. But "the getting to

the bottom" remains a builder's risk, and sometimes the most serious he has to encounter. If the foundations are of considerable extent, and the nature of the subsoil is not accurately known, the architect should have one or more large trial-holes sunk to the level of the intended bottom before he asks builders to estimate for the works in the foundations. For they will then be able to see not only the nature of the strata but the probabilities of their meeting with water in the foundations, and having to incur the expense of pumping, which, with the presence of running sand, might increase the expense tenfold beyond that originally expected from superficial inspection. In exceptional cases, where the probability of bad foundations is great, a prudent builder would probably decline to take the risk altogether, and state his reasons for doing so, because otherwise he must load his estimate with so large a sum to insure him against probable loss as would effectually exclude his chance of obtaining the work; or he must take the risk without a sufficient equivalent, which is not business-like. The fair value of the works in the foundations, be they good or bad, should be borne by the building owner, but the risks attaching to them remain with the builder. How great is the risk sometimes attaching to foundations and works under ground most builders have learned to their cost, and there are times when the most careful builder suffers terribly from unexpected difficulties. One instance of risk may suffice. In the building a large workhouse in the Midland counties, the sinking a well was included in the contract. The well was to be 9 feet in diameter and 120 feet deep, and steined throughout with brickwork. No special difficulty was anticipated, and a very moderate price was included for the well in the estimate. The sinking the well progressed favourably till it had reached a depth of about 110 feet. It may be said never to have got any deeper. A running sand was met with which defeated all the builder's efforts, and having spent about 2,000*l.*, and endangered the safety of the new buildings near the well, the attempt to reach the contract depth was abandoned.

(To be continued.)

#### CHRIST CHURCH, CLIFTON.

THE competition for the enlargement of Christ Church, Clifton, which has just been decided, is exciting a great deal of surprise in Bristol, and the history of the transaction suggests the free-and-easy way in which architects can be made the tools of other people. The church was originally designed by Mr. JOHN NORTON, and the tower and spire are so impressive in character as to be one of the landmarks of Clifton, which visitors never forget. If any alterations or additions to the building were needed, the most suitable architect would be apparently Mr. NORTON. But for some unknown reason Mr. WOOD, of Bristol, was consulted several years ago and prepared plans for additions. His plans were set aside for reasons as mysterious as those which dictated his commission. Then Mr. CHARLES HANSOM was requested to undertake the work, and he produced plans which were most carefully worked out. His design was illustrated in *The Architect* some years ago, and, unless we are mistaken, the drawings were utilised to raise subscriptions. In Bristol it was accepted as certain that the additions were to be according to Mr. HANSOM's designs. But to the surprise of the local architects a competition was commenced, and, strange to say, Mr. NORTON undertook the office of reporting on the designs. The result was that the first prize was awarded to Mr. W. BASSETT SMITH, of London, and the second to Mr. E. H. EDWARDS, of Bristol. There are three things we should like to know—first, why Mr. NORTON did not design the additions to his own church instead of examining the work of other men? secondly, why Mr. WOOD's designs were not adopted? and thirdly, why Mr. HANSOM's competitive designs were set aside in favour of those by a London architect? The funds for the work are limited, and there must be some special reason for calling in an architect who lives at a distance, and who must charge travelling expenses. Under the circumstances the victor is not to be envied.

The Bronze Statue of the late Lord Frederick Cavendish has been successfully cast at the studio of the sculptor, Mr. Bruce Joy, West Kensington, and it has been decided to erect it at Barrow. It is to be unveiled by Earl Spencer next April.



## PARIS NOTES.

THE Exhibition of Drawings of the Modern School (*Dessins du Siècle*), organised at the Ecole des Beaux-Arts by the Artists' Association, was opened on Monday, the 4th inst. It contains original sketches and drawings executed by the great masters of the modern school since 1780. Numerically speaking there are 36 by David, 49 by Prudhon, 15 by Gleyre, 27 by Géricault, 38 by Delacroix, 8 by Decamps, 29 by Delaroche, 13 by Gavarni, 32 by Millet, and, among the more modern ones, 27 by Meissonier, &c.

The Minister of Public Instruction has issued a decree modifying the conditions in the competition for the Sèvres Prize. In future the award will be made every two years, and there must be two stages. The subject for competition is a vase or set, at will, after given directions. The sum of 3,000 frs. will be apportioned among the competitors, whatever their number. In this there will be but one prize given, to which the sum of 5,000 frs. is attached. On the recommendation of the jury the model coming second in order of merit may be acquired by the State, at a price to be determined after the competition. The subject selected for 1884 is a boudoir chimney-piece, with supports and scrollwork. The ornaments for the top and the lighting apparatus attached may be included in the design.

A great sale of curiosities and works of arts belonging to Baron de Gunzburg took place last week at M. Georges Petit's art gallery in the Rue de Sèze. Five pieces of tapestry representing scenes from "Don Quixote," after Coypel, were first put up in separate lots, and sold provisionally for a total of 96,000 frs. In accordance with the conditions of the sale, they were afterwards offered in one lot, and finally, after a very spirited contest, fell to Madame Sluys for 140,000 frs. A suite of twelve Gobelin's tapestry panels representing the months, after Audran, were taken by M. Boucheron for 62,500 frs.; a Louis XV. chest of drawers in lacquer, with brass mountings, fetched 23,100 frs. (Foar Bey); a marble bust of Dame Marie Servat, by Houdon, 44,000 frs. (Comtesse de Courval); four Louis XIV. armchairs, 10,000 frs.; a clock of the same period, 12,100 frs.; two chandeliers of rock crystal, 16,000 and 18,000 frs. respectively; a pair of carved consoles, 1,800 frs. The day's sale amounted to 468,120 frs.

The sale of Manet's works at the Hôtel Drouot on Monday and Tuesday last proved a brilliant success, phenomenal prices being reached by many of the pictures. The purchasers belonged almost exclusively to the inner circle of disciples gathered round the founder and chief of the Impressionist School, for, truth to say, both dealers and the general public remained very cold. No doubt the sale will ever be held up by the followers of Manet as a triumphant vindication of his cause in art. The pastels, water-colours, drawings, and lithographs were disposed of for sums varying from 30 to 1,800 frs., while among the oil paintings that fetched high prices may be mentioned:—*Argenteuil*, 12,500 frs.; *A Bal at the Folies-Bergères*, 5,850 frs.; *Hamlet*, 3,500 frs.; *Olympia*, 10,000 frs.; *Washing Linen*, 8,000 frs.; *Nana*, 3,000 frs.; *The Music Lesson*, 4,400 frs.; *Chez le Père Lathuile*, 5,000 frs.; *The Balcony*, 3,000 frs.; *The Barmaid*, 2,500 frs.; *Young Girl in a Garden*, 5,000 frs.; *The Nymph Surprised*, 1,250 frs., &c., &c. The first day's sale produced 71,892 frs. and the second 43,745 frs.—a total of 115,637 frs. in the short space of four hours in all.

Two of the turrets of Notre Dame Cathedral were almost entirely demolished by the gale of last Saturday week, and, in order to prevent any damage from the infiltration of water through the fissures thus occasioned, the work of restoration has been commenced immediately. Decorators are engaged in restoring the vermilion colour on the three large doors of the principal entrance on the square in front of the cathedral. These three doors—known respectively as the *Porte de la Vierge*, the *Porte Sainte-Anne*, and the *Porte du Jugement*—are considered to present the most beautiful specimens extant of Mediæval work in wrought iron. They were thoroughly restored by Boulanger twenty years ago, but since then have not been touched.

The Municipal Fine Arts Committee has drawn up a first list of commissions for paintings, amounting to 300,000 frs., for the reception-rooms of the new Hôtel de Ville. In 1882, on the occa-

sion of the opening, two large fountains, constructed to imitate stone, were erected on the open space in front of the building, and removed immediately after the ceremony. According to the original plan of the architects, these were to be rebuilt permanently and form the principal decoration of the square. The project, however, being objected to on the ground that the fountains would obstruct the view of the building, it has been decided to abandon their construction. In their place ornamental lamps will be erected, with a *parvis* or rotunda before the entrance, similar to that of Notre-Dame. The entire cost of these will amount to only 411,000 frs., or only one-half of the estimate for carrying out the original plans.

A dispute of considerable importance has just occupied the Paris Civil Court. The decision in this case is noteworthy as an application of the old maxim of *caveat emptor*. Mr. Waltner, engraver, purchased from Bourdois & Co. an etching by Rembrandt, known as the "Hundred Guilder Print," for a sum of 3,000 frs. The engraving was mounted on a sheet of vellum paper marked in the corner, in French, "First state—very rare." It is scarcely necessary to explain that the "first state" of an engraving is before the plate has been retouched or modified in any way. There may thus be several "states" of an engraving, and of this particular one there are, in fact, as many as seven or eight. Mr. Waltner subsequently discovered that his copy was not one of the first state, and refused to complete the purchase. This etching in its first state is very rare. Only eight copies are believed to exist, and the possessors are known. Two are in the British Museum; one each at Paris, Amsterdam, and Vienna; a sixth belongs to the Duke of Buccleuch; a seventh to Mr. Holford; while the eighth was sold in 1867 to M. Eugène Dutuit, of Rouen, for 29,500 frs. These original proofs are now estimated to be worth from 30,000 frs. to 40,000 frs. (1,200*l.* to 1,600*l.*) apiece. Experts who were appointed decided that it belonged to the second state, the successive changes the etching underwent being, moreover, mentioned in various works on the art of engraving. The Court finally gave judgment against Waltner, ordering him to take the work and pay the 3,000 frs., with interest and costs, on the grounds that the engraving is really by Rembrandt, although not a first proof, answering to the expectations of Waltner, and that that gentleman was possessed of the artistic knowledge necessary to judge of the value of the copy. Furthermore, that although the false inscription was to be regretted, it was not the determining cause of the purchase, nor proved to have been written by Bourdois & Co.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE seventh ordinary meeting of the Institute was held on Monday evening, Mr. Horace Jones, President, in the chair. The decease of John Henry Parker, C.B., hon. member, was regretfully announced.

The PRESIDENT then stated that the Pugin Travelling Studentship had been awarded to Mr. J. G. Sankey, and the Godwin Bursary to Mr. F. R. Farrow, both awards being for the current year.

## The Royal Gold Medal, 1884.

The PRESIDENT next announced that the Council proposed to submit to Her Majesty the Queen the name of Mr. William Butterfield, architect of All Saints' Church, Margaret Street, W., of Keble College, Oxford, and of various churches, colleges, and domestic residences in England and elsewhere, as the person to whom the Royal Gold Medal should be awarded for the current year.

## Review of the Education and Position of Architects in France since the Year 1671.

The SECRETARY then read a paper under the above title, of which the following is an abstract. The author explained that:—

The starting-point of his brief review, 1671, was pitched upon because it was in that year that the French Minister of State, Colbert, established the Academy of Architecture, at first composed of only six architects, namely, Leveau, Gittard, Antoine Lepautre, Bruand, Dorbay, and Mignard. From the interesting story of its rise, which was given in some detail, it appeared that it grew out of a committee formed to superintend the execution of the famous colonnade of the Louvre after the designs of Dr. Claude Perrault. In the course of a few years the first six architect-academicians were strengthened by the addition of Jules-Hardouin Mansart, François Blondel, Claude Perrault, La-Motte Coquart, Desgodetz, and André Felibien. The last-named, who



was chosen secretary, was remembered for his work entitled "Des Principes de l'Architecture." Levau was the architect of the famous palace of Vaux, barely finished at a cost of eighteen millions of francs, a sum computed by Voltaire a century afterwards as worth double in his time, or 1,440,000*l*. Bruand was the architect of the church of the Invalides, which Jules-Hardouin Mansart spoilt when he surmounted it with his beautiful dome, now covering the tomb of Napoleon. Mignard built the Porte St. Martin in Paris, and Dorbay was the architect of the Collège des Quatre Nations, under whose dome the French Institute has long held its meetings. Desgodetz was best known as the author of the work "Les édifices antiques de Rome," whither he was sent by Colbert to measure and draw the finest buildings. He was also a professor of architecture, and a manuscript of his lectures was presented by M. Guénepin to the Royal Institute of British Architects in 1842. The first address to the Academy of Architecture was delivered by Blondel, remembered also as the architect of the Porte St. Denis, on December 31, 1671, and was prefixed to his "Cours," publication completed in 1683. Salient passages were given from this remarkable address. In Mr. White's opinion it was impossible to regard the literary performances of Blondel, Perrault, Desgodetz, Felibien, and their contemporaries of less note, with other than sentiments of admiration and humility. Indeed, he did not hesitate to assume that the acknowledged excellence of many of the royal and public buildings executed throughout France during the seventeenth and eighteenth centuries was largely due to the precepts taught, the information supplied, and the inquiries instituted by the Academy of Architecture. It was also largely due to the wise and judicious control exercised by successive Ministers of State over the deliberations and works of the Academy, and to the confidence, so happily inaugurated by Colbert, which existed between it and the State. Nowhere was this better shown than in the order to Perrault to undertake a translation of Vitruvius, in the despatch of Desgodetz to Rome to measure the antique monuments, and in the demand made on the Academy to report on the source and quality of the stones used in the old churches and other buildings of Paris and its environs. This last was a memorable task, as the striking details given in the paper showed. An account was next given of the relations not long afterwards established between the new Academy of Architecture in Paris and the Academy of France founded at Rome in 1666, with Errard, President of the Paris Academy of Painting and Sculpture, at its head. He started for the Eternal City with a dozen of his young painters and sculptors in the spring of that year. The French art colony established themselves in the Capranica Palace, and lived there at the cost of Louis XIV., whose successor transferred the Academy seventy years afterwards to the Mancini Palace, where it remained until 1803, when it removed to the Villa Médicis, where it is still housed. From 1666 until the present time a student of painting and a student of sculpture had been sent almost every year to Rome. But during the seventeenth century no architectural student had apparently been admitted to the Academy of France at Rome, nor until 1720 did the *grand prix* in architecture exist. Three years previously the Royal Academy of Architecture was formally incorporated, the number of members being increased to 24. During the fifty-nine years which elapsed between the incorporation and 1776, when it obtained fresh letters patent, 56 students of architecture were sent to Rome. About the middle of the eighteenth century Voltaire wrote his scathing criticism on the Paris of his day, too much of which, it was hinted, applied to the London architecture of ours. Yet even at that moment signs were not wanting, especially in Gabriel's plans for the Place Louis XV., now the Place de la Concorde, approved by the king in 1753, that architecture was righting itself. The academies founded by the monarchy, guided by such statesmen as Richelieu, Mazarin, and Colbert, succumbed in the darkest days of the Revolution, but were re-established as soon as the Republic began to sober down. The history of these institutions, especially as concerned architecture, in their revived form was traced through the periods of the Consulate and the Empire, down to the Bourbon restoration. Louis Philippe reinstated the fifth Academy, that of the moral and political sciences, since whose reign the Institut de France, in spite of unimportant changes, had always consisted of five such bodies, housed in the Palais de l'Institut, originally the Collège des Quatre Nations. It was well known that the Academy of Fine Arts, subdivided into five sections, is composed of fourteen painters, eight sculptors, eight architects, four engravers, six musical composers, with ten *Académiciens libres*, all Frenchmen; ten foreign associates,\* and a permanent secretary. An account was next given of the very important School of the Fine Arts, whose existence might be said to date from the beginning of the present century. It was set up by the Government, and was at first placed under the immediate control of the National Institute; but in 1863-64 Napoleon III. placed it under strict State rule. A survey of its constitution, general working, scheme of studies, and system of competitions for prizes was taken, and the roll of names of illustrious French architects

nurtured in this school or under its auspices, especially at Rome, was gone through. The school was governed by a council, presided over by the director, and consisting of two painters, two sculptors, two architects, one engraver, the permanent secretary or the Academy of Fine Arts, an author (Alexandre Dumas), and three other persons, with eight professors of the school proper and of the studios. The professors teaching in the school were three for painting, three for sculpture, three for architecture, all, with two exceptions, Academicians. There were four painters and four sculptors who attended to the courses of design and modelling, and there were seventeen special professors attached to the school. The prizes in architecture were awarded on the recommendation of a jury, consisting of thirty architects. A diploma had been lately granted by the school, and there was a *concours d'émulation* common to painters, sculptors, and architects. A full description of the French School of Rome was then given, and a digression made, in order to refer to the great and really honourable competition for the new Opera House. It appeared that among the 173 architects who submitted designs nine had been students in the Academy of France at Rome, and eight of these were included in the first batch of sixteen, out of which the jury had to finally choose five. Of the five, four were the works of the students of Rome; and when these five gentlemen were invited in the second stage of the competition to submit complete designs, M. Garnier (student of the Academy at Rome in 1848) was unanimously chosen as the most worthy to construct the Opera House. The open, unlimited competition for that work, which excited Parisian attention in 1861, sufficed to attract men of assured position and of the very highest talent. The drawings submitted, which were all publicly exhibited before the award was announced, were plain, unadorned, unpretentious sketches, made principally by the architects themselves, and sent in, in the majority of cases, without even an attempt at artistic finish. The public, who avoid even the gay and brilliant architectural room of our own Royal Academy, would not have wasted a glance upon such dreary pictures. Hence, perhaps, it was considerate and generous of the French administration, as well as lucky for professional colleagues on the other side of the "silver streak," that the judges appointed to determine the selection of the architect of the new Opera House consisted exclusively of architects. The author of the paper concluded as follows:—

"Yet, patent as are the advantages of a system the magnificent results of which can be judged by a study of the national edifices and public monuments of France, there are many people in that country, and a much greater number in this, who are satisfied that State-supported academies and schools are mere derelicts of Protection, and opposed in every sense to the glorious money-getting principles of Free Trade. But, to my mind, the difference between a body of architects trained under an academic system such as that which flourishes in Paris, and a body of architects left to pick up knowledge in a speculative scramble for employment, is not unlike the difference between an army of soldiers fit to take the field and a scratch gathering of men with muskets. If any plea were needed at the present time in favour of an English architect possessing early in life a scholarly acquaintance with the French tongue, it might be found in the existence of that splendid literature which, during the last 250 years, has helped to raise France to the summit of artistic eminence. It might also be found in the pleasure and profit to be derived from a true appreciation of the evident understanding, the polite consideration, the charm of manner, with which men of science and letters in France treat the ennobling subject of architecture. On the other hand, if anything could add to the depression which a reference to architecture occasions among similar sets of people in England, it might be found in the avowed opinions of many English scientists and authors, successful in their line, and of many political representatives, successful in trade or commerce, whose blind confidence in the practical genius sufficient to make this country rich and powerful has blunted that perceptive faculty which should seek, I think, to crown the edifice by developing, to the highest possible degree, the literary, artistic, and social instincts of the nation. The respect entertained by all classes of Frenchmen for the higher arts has developed with the growth of their academies, and this has been aided by the close contact of academicians under the dome of the Mazarin Palace. Each academy in turn presides over the whole Institute, and last year the Academy of Inscriptions, being at the head, delegated a member who sat as President of the Institute, with a delegate from each of the other four academies as Vice-Presidents, and the Secretary of the Academy of Inscriptions as the Secretary of the Institute. In like manner, each section presides in turn over the academy of which it forms part, and last year the section of Musical Composition was at the head of the Academy of Fine Arts. Thereby it fell to the lot of M. Gounod, the celebrated composer, to sit as president at the annual meeting held on October 20 last, when the *grands prix* in painting, sculpture, and architecture were distributed, together with a large number of other prizes. 'In Paris,' I read in the *Times* of the 18th of last month, 'these great days under the cupola of the Institute are the centre of interest to the whole of the classes which pretend to any cultivation. There is no standard by which a man is measured in France higher than the standard of his performances in literature and art. Wealth

\* The only English architect who is a member of the Institut de France is Professor Donaldson, an *Associé étranger* of that body.



and birth are not allowed by public opinion to have the *pas* of intelligence. Men of letters and great artists have a position, as such, to which with us they have nothing comparable.' If, as I believe, that be really the case, it is largely due to the beneficent influence of a system, prolonged for more than two centuries, by which school, academy, and State have worked together for the national good—a system by which the monuments of Greece and Rome have been brought under the dominion of Frenchmen, and thereby conferred on them the inheritance of intellectual arts that contributed to the glory of Athens, enabling the little Republic to divide with Imperial Rome the homage of the modern world."

The PRESIDENT said the paper formed a complete and comprehensive essay, embodying a very great deal in a very small space, and affording plenty of opportunity for thoughtful consideration. Some of the great architects commemorated in it might afford matter for interesting remark.

Mr. R. PHENÉ SPIERS, F.S.A., said the paper had dealt with an enormous amount of material, but he proposed addressing himself to a somewhat more detailed account than that given in the paper of the peculiar system organised in France for the teaching of students in architecture. Mr. White, perhaps, had not sufficiently drawn attention to the three educational *ateliers* or studios for the profession which were in operation in Paris. The paper mentioned the great change made in 1863 in the organisation of the school, whereby the management and the distribution and award of prizes were transferred from the Institute of France and the Academy. But what was then aimed at was a revolution, to be made by a sort of *coup d'état*, and the whole was due to the prompting of M. Viollet-le-Duc, who had considerable influence with the Emperor. Finding that studies connected with Mediæval art were more or less ignored by the Academy, he endeavoured, in the interest, as he oddly enough said, of freedom of thought, to make provision that all students thenceforward should be taught by teachers nominated by himself. The establishment of the three *ateliers* dated from that period, but it was found impossible to carry out Viollet-le-Duc's proposed reform. Day after day he attempted to lecture, but the students would not listen to him, and he was obliged to give it up. The result was the establishment of the three *ateliers* by way of compromise. Other *ateliers*, however, less closely connected with the school, were allowed to exist. The speaker went on to describe those of both kinds from personal knowledge. He thought the latter numbered about half a dozen in all. The more private ones would originate in the architectural students clubbing together and appointing a professor of their own. The master of the *atelier* to which he himself belonged was M. Questel, who had been so appointed in succession to MM. Blouet and Gilbert, the latter of whom had died, and the former had resigned. Of the system of study pursued in this *atelier*, which was attended by about one hundred and fifty students, Mr. Spiers gave many interesting particulars. Some of those under instruction there were preparing to compete for the *grand prix de Rome*, the course of training for which would last from ten to fourteen years. Others had been studying two, four, or six years; and as the professor naturally gave most of his time to the seniors, these had to coach the juniors, who often profited most from the hints of those but little older or more advanced than themselves. "The accumulation of knowledge thus constantly going on in a fairly conducted *atelier* was thus very great. Each student was in friendly rivalry with his brother students. In like manner, each *atelier* would vie with every other. In this way all would be working together to raise the character of the designs, and to lift higher the standard of attainment. It was impossible to conceive the extraordinary effect this had upon the French students. Curiously enough, if only by way of comparison, there had been, for the first time this year, a competition at our own Royal Academy somewhat like that in the French School of the Fine Arts, in which painters, sculptors, and architects are wont to compete. That innovation had been established since his time, the speaker said, and he knew of it only from Mr. White. Mr. Spiers expressed his gratification that two or three student-architects in the Academy competed this year for a prize offered for the best wall-painting. It was the first instance in which students from the architectural school were admitted as candidates for such a prize, which was naturally meant for painters. The painters proved to be too strong for their new rivals, but it might be hoped that some day a student-architect would snatch a prize from his brethren of the brush. The speaker then gave an elaborate account of the three ordeals to be passed by competitors for the *grand prix de Rome*. He next enlarged on the great advantage possessed by France over this country in the excellent provision made by the Government, by means of its admirable elementary schools of design, for the universal and effective teaching of drawing—an important point which Mr. White had not mentioned. A sketch of the professional career of the architectural aspirant in France and England respectively followed, with suggestions of interesting parallels and contrasts. Mr. Spiers next remarked upon one great difference between the French system and our own, a difference affecting not only our architecture, but our art of every kind, namely, the entire absence here of any study of composition, as contrasted with the great attention paid to that important matter in France. The contrast could be

seen even in the letters written home by French schoolboys as compared with those of our boys. Mr. Spiers concluded by proposing a vote of thanks to Mr. White for his paper.

Mr. ARTHUR CATES said Mr. Spiers had well followed Mr. White, and had given further detail as to the practice of the French school. He had not, however, touched upon one most important element, and that was the recent introduction of the *diplôme d'architecte*, which had been introduced into the Ecole des Beaux-Arts. That was a point of moment, and one to which he thought the Institute might well address itself. He hoped Mr. White's paper when published would give full details of the examination. Mr. Cates proceeded to sketch the history of the question in this country. He recalled its agitation in the Architectural Association in 1854-55, concurrently with M. Adolphe Lance's publication of a *résumé* of his articles on the subject which first appeared in 1855. At the inaugural meeting of the Architectural Association, Sir William Tite, the then President of the Institute, attended, and Mr. Alfred Bailey's opening address touched on the subject. In his opening address on November 5 of that year, Tite reported how surprised he had been at the strong feeling evinced by the Association in favour of an examination, and of something like a diploma. Later on in the session Mr. John B. Papworth brought before the Institute Adolphe Lance's tract, which led to much discussion. Mr. Cates made several quotations from that work, one of them referring to the action taken by the Spanish Government as regards architects in 1801, on which, as well as on the evidence given in the pamphlet of the ripening of the question in France and other Continental countries, as well as in Spain, he commented at large. He added that it would be an exceedingly happy thing for this country if some such principle as was recognised abroad was established in England, namely, that no architect should be employed to superintend the erection of any state building unless he had passed an examination. In the days before the reorganisation of the Ecole des Beaux-Arts there was much hostile feeling in France as to the influence which any compulsory examination might have upon the progress and development of architecture. It was feared that such a system would end in architecture being dictated by the professors of the Academy, and Mr. Cates thought it was mainly on that ground that the earlier efforts to establish something like a diploma failed. Such a feeling was rife in England also in those days, and he could well remember how during his pupilage it was believed that any candidate for a studentship in the Academy who should be daring enough to submit a Gothic design would be sure to be plucked. The step taken by the Ecole in insisting upon examination for the *diplôme d'architecte* was of very great interest to the Institute, for within the last three or four years, after a struggle extending over twenty-seven years, they had at last answered the memorial of the Architectural Association in favour of an obligatory examination for Associates of the Institute. [The memorial of 1855 was here read.] The result of that memorial was the concession of examination, at first voluntary and afterwards made compulsory, for admission to the Institute. He had heard it spoken of with scorn and contempt as a surveyor's examination. Mr. Cates thought it very wrong indeed that any member of the Institute should have so spoken of it, and argued that the curriculum by no means merited such a description, though he regretted it did not follow more closely the lines laid down by the Ecole des Beaux-Arts. The speaker next referred to the system followed in the class for Architecture at the Royal Academy, and of the successive improvements in its organisation introduced under the auspices of the late Mr. Street and its present master, Mr. Spiers. In seconding the vote of thanks, he expressed the hope that the result of the paper would be to advance the interests of the profession in this country, and to strengthen the Institute as representative of that body of architects to which admission could only be obtained by passing an examination, guaranteeing at any rate that minimum of knowledge which every architect should possess.

Mr. E. C. ROBINS, F.S.A., said he was not acquainted with the curriculum of the French School of Fine Arts, but said he had lately had the opportunity of visiting the architectural schools of Germany, and gave some details in attestation of their efficiency. Yet, a German gentleman visiting this country had expressed his surprise that, in spite of the complete education they possessed in Germany, he did not think that they could produce such drawings as he constantly observed in the English professional journals.

Mr. R. PHENÉ SPIERS, on the question of how a student managed to live during the many years he passed at the School of the Fine Arts, said that French students earned an income, slender compared to what similar men expected in England, by assisting architects during a portion of each day, and that the architects permitted their assistants to absent themselves for the purpose of working at the School.

On the motion of Professor KERR, seconded by Colonel PRENDERGAST, the discussion was adjourned. The vote of thanks having been carried by acclamation, the author of the paper acknowledged it, and the proceedings terminated.

**The Private View** of the Nineteenth Century Art Society will be held at the Conduit Street galleries next Friday.



## PETERBOROUGH CATHEDRAL.

A YEAR having elapsed since the first steps were taken for the restoration of Peterborough Cathedral, Dean Perowne has given the following account of what has been done during that time :—

It will be remembered that towards the close of the year 1882 very considerable alarm was occasioned by the state of the great central tower. Indications of danger were evident. A rapid movement was going on in the upper portion of the lantern ; the gaping and unseemly cracks by which it had long been torn and disfigured were widening and fresh rents were visible ; and Mr. Pearson, R.A., the cathedral architect, when summoned to examine and report upon it, recommended that the upper portion should immediately be taken down and that the whole of the central tower and the two eastern piers should be reconstructed.

The restoration committee at their first meeting on January 24, 1883, adopted the report of the architect, and a contract was entered into for the reconstruction of the tower as recommended in the report at an estimated cost of 13,073*l*. Preparations having been made by the removal of the screen and organ, and the nave having been fitted up temporarily for divine service, the actual work of taking down the tower commenced on April 5, 1883.

As the work proceeded it became evident that no expedients for patching up and trying to preserve the tower in its existing state would have been of any use. Lantern and piers alike were of the most wretched construction. The walls of the lantern, dating from the fourteenth century, were mainly composed of rubble and "pit mortar," with a very thin facing of Barnack stone. Two attempts had been made, it was evident, within thirty or forty years to rebuild this lantern. Very considerable fragments of the old Norman tower had been employed in its construction, and, being embedded in the rubble, their mouldings are as fresh as if they had been cut yesterday. Indeed, so much of this old Norman work has been recovered that it may be possible entirely to reconstruct from it the Norman arcading above the arches inside the lantern.

When the piers were reached, which had been crushed and peeled off by the too great pressure of the heavy Norman tower (and one of which, that at the north-east corner of the crux, had been partially rebuilt, probably by the fourteenth-century builders), it was found that they were of no better masonry than the lantern above them. In fact, it would seem as if the fourteenth-century builders had copied but too faithfully the manner of their predecessors.

The core of these great Norman piers was nothing but dust. The pressure on the face of the south-eastern pier had at one time forced out a considerable quantity of this dust, and then the device had been resorted to of turning the mouldings of the pier with their faces inward, so as to fill up the cavity, and the whole was finally strapped together with flat pieces of timber secured in the place of the original mouldings with strong iron hoops. These piers, massive as they were, and designed to carry a heavy weight above them, rested, strange to say, on the shallowest and poorest foundations. Small stones laid on loose gravel were all they had to rest upon, though if the builders had gone some 3 feet lower they would have touched the solid rock. The wretched construction of these piers and of the walls above the arches led to a careful examination of the two western piers, when it was ascertained that, though they had not been crushed and peeled like the others, they were in other respects little better than their eastern companions, as the following extract from Mr. Pearson's report thereon will show :—

"The openings I have had made into the piers by removing some of the facing stones show very conclusively that the construction of them is like that of the two others which have been taken down, and which consisted of a thin facing of stone for the outside facing without any bond, and within the casing the whole of these piers was filled in with small rubble stones and sandy earth. There was scarcely a stone in them larger than a man's hand, and mortar seemed not to have been used, except where some alterations had been made at a later date. It is quite impossible to conceive a worse piece of construction, and it is equally impossible to understand how it is that these piers have stood so long ; nothing but the power of the Barnack ragstone, out of which the thin outside casing is formed, to sustain the enormous weight, saved them from destruction. There are abundant evidences to show that these two western piers, like those taken down, have barely strength in them to keep up. I have, therefore, with much regret, come to the conclusion that on no account must any attempt be made to rebuild the tower on these piers."

The excavations which were made at the bases of these piers in order to test the state of their foundations led to a very interesting discovery. At the foot of the south-eastern pier were found the remains of a Saxon building, doubtless the church of the ancient monastery. First of all, there was laid open to the north of this pier in the nave a wall, or rather two walls, with a narrow space between them, running east and west. Beyond these to the north was evidently open ground, a short wall at right angles to the others coming there to an abrupt termination ;

whereas on the south side at a depth of some 6 feet below the level of the present cathedral, were traces of the plaster floor of the ancient building. This was again reached in the south aisle, and extends probably to a considerable distance west and south. In the south transept the floor can be followed eastward to a plaster seat placed at the extremity of the building against the external eastern wall. Here it is plain that the limit of the Saxon building eastward has been reached, because in the open surface beyond a large stone coffin is standing, obviously of much later date. How far the remains of this Saxon building extend, and whether the lines of walling indicate the existence of one or more than one building, it is at present impossible to determine. This can only be done when the pier standing upon it and the immense shoring and scaffolding necessary for its demolition have been removed.

No Saxon ornamental stonework has yet come to light in the western piers, but in the foundation or interior of the eastern pier a few fragments of Saxon moulded work were found, such as perforated slabs of windows, door-jambs, and lintels, and one very interesting and richly-carved fragment of a capital almost unquestionably Roman. This may have been brought from Castor ; but it is curious that no other fragment of Roman work has been discovered.

The estimated cost of the additional work rendered necessary by Mr. Pearson's last report recommending the taking down and reconstruction of the two western piers was 5,779*l*., and, in accordance with a resolution of the restoration committee made at their last meeting, on November 7, 1883, the contract has been altered so as to provide for this work.

## TRURO CATHEDRAL.

AN account of the progress of the work at Truro Cathedral has been given by Lord Mount Edgcumbe the chairman of the Building Committee, with the object of obtaining aid to save the necessity of having to place a temporary roof upon unfinished walls. His lordship says :—

The first division of the work undertaken by the committee, consisting of the choir (112 feet long and 70 feet high internally), with its side aisles and eastern transepts, the restored south aisle of the old church, and the narrow aisle which unites the new building to the old, is rapidly approaching completion. The timbers of the main roof are being fixed, and the money for the whole has been received or promised, amounting to about 54,000*l*., including nearly 12,000*l*. which had to be expended in the purchase of adjacent buildings.

It was originally thought that only this division could be erected in our time, but, for constructional reasons, it was found desirable to lay the foundations of the great transept and of the western piers of the central tower ; and when the present Archbishop of Canterbury quitted the diocese an earnest desire was manifested throughout the county to erect a further portion of the cathedral, in which he had taken such a deep interest, as a memorial of his episcopate. The sum of 6,700*l*. has been subscribed for this purpose, a sum sufficient to complete the south transept. This is being actively proceeded with, as well as the south porch and adjoining baptistery, both provided for by special funds ; one being the gift of Canon Philpotts, the other the memorial to Henry Martyn.

Few persons outside the diocese are probably aware of the energy with which the work, so far, has been carried on, or of the architectural beauty of the work itself. But it must be evident that the erection of the south transept, without the completion of at least the piers and arches of the central tower, would be of little advantage, and the committee are now most anxious to complete the north transept, and, if possible, the lantern of the main tower up to the ridge of the choir roof and the small clock tower, before closing the work of the present generation. For this and for internal fittings of the simplest kind a further sum of nearly 15,000*l*. is required. The young diocese has shown its deep interest in the work. It is not sparing itself and asking others to bear its burdens. But it will be remembered that it has had to look to voluntary gifts alone for everything connected with its establishment—for the endowment of the bishopric itself (with the exception of 800*l*. a year), and the provision of a residence for the bishop, as well as for the erection of the cathedral. All this has been to a great extent accomplished during a period of extreme industrial depression, and a large annual outlay will be ultimately required to provide for the permanent conduct of the services of the cathedral, which are at present kindly undertaken by the rector of St. Mary's with the help of the honorary cathedral officers.

The First Half-yearly Issue of the "Railway Companies' Directory," edited by Mr. Percy Lindley, giving the capital authorised, received, and expended, the revenue, dividends, mileage, with classified lists of the directors and officials of the railways of the United Kingdom, will be published next week.



## NOTES AND COMMENTS.

AN invitation has been sent from the Council of the Institute of Architects to all the members who have gained the PUGIN Studentship. It is proposed to bestow a medal in connection with the studentship, and it has been considered that the most fitting designer would be one of the successful competitors in a past time. So far the proposal is deserving of commendation. But if there be a medal, it should be of gold rather than of silver. The Institute funds are large enough to provide for the use of the more precious metal. It is also, we consider, bad policy to offer a prize of ten pounds for the best design. Many of the PUGIN students have attained position as Fellows in the profession, and they are more likely to compete for the love of the thing than for so paltry a sum. If the circular had requested a design from each of the PUGIN students, and if the selection of the one best adapted for reproduction had been assigned to the students themselves, instead of to the Council of the Institute, there would have been a heartier response than the prospect of receiving a cheque for ten pounds will ever invoke.

THE late Mr. JOHN HENRY PARKER was one of the most remarkable of English archaeologists. He was trained as a bookseller, but in his investigation of buildings he acted as if he were a mason. It was characteristic of his temperament when he set about investigating the masonry in the foundations of Roman walls and conduits—a class of work which men who were acquainted with building had neglected. Mr. PARKER was not much of a draughtsman, and he was more at his ease in treating of rough masonry than of delicate tracery and ornamentation. But his "Glossary" will be ever an invaluable work, if it were only for its illustrations of the best details of English Gothic. If Mr. PARKER had been trained as an architect his thoughts about building would have gained a coherence and unity which they did not possess. He could not write at much length on construction without losing the thread of the disquisition, and his books on Roman archaeology are a heap of facts in inextricable confusion. He was more competent for a work consisting of short articles like the "Glossary." Mr. PARKER was an enthusiast, and he did yeoman service to archaeology, but his career should be a warning to amateurs who attempt the treatment of practical subjects without practical knowledge.

IF Mr. WATTS, R.A., is able to have his group cast in bronze by May, the next exhibition of the Royal Academy will possess at least one great work in sculpture. The artist has already shown his skill in modelling a horse. In his new group Mr. WATTS represents one of the first trainers of a horse, and the rider is apparently delighted with his new powers. With one hand the man shades his eyes and looks into the distance as if he had found a means to overcome space and time; with the other hand he grasps the animal's mane. A man is never more manly than when he has mastered a horse, and Mr. WATTS has expressed the idea not only by the position of the rider but by the largeness of the style of treatment, which recalls the massiveness of ALCAMENES. The new group is a noble work of English art, and it is too important to be allowed to form part of a private collection.

MR. BOEHM's fine statue of Sir FRANCIS DRAKE on Plymouth Hoe is to be unveiled, with much naval and military display, on St. Valentine's day by Lady DRAKE, of Nutwell Court, and the historic town, of which Sir FRANCIS was mayor, will worthily celebrate the event. There is to be a banquet in the Guildhall, and an exhibition there of relics of the great circumnavigator, including his swords, cups, jewels, his chair (from Oxford) made from the ship in which he made his first voyage round the world, and one or two original portraits. A commanding site has been chosen for the statue, overlooking the green where the famous game of bowls was played when the Armada was announced to be in sight, and the Sound beyond. The statue is placed on a bold and handsome pedestal of granite, designed by MESSRS. HINE & ODGERS. The shaft is one large block of Peterhead red granite, and the steps, plinth, and cornice are of local grey granite. In excavating for a foundation some old Portuguese copper coins were found.

DAMAGE on a small scale was done to the cathedral at Carlisle during the late gales. Some ordinary glass windows were partially wrecked, lead was torn off the roof, and finials were broken off, besides the large cross over the entrance being carried away. Lovers of these old monuments of bygone art will not be sorry to learn that the wind further made short work of some stove-pipes of nineteenth-century work.

THE Municipal Casino at Nice was formally opened on Saturday last. It was commenced three years ago, and has, it is understood, cost 240,000*l*. The building is constructed on a long and solid bridge over the river Paillon, the dry and unwholesome bed of which will, when the whole scheme is completed, be almost hidden from view. A fine open space in front of the Casino, by which the Place Masséna is doubled in size, is not the least of the advantages conferred by the work on the town; and when the bridging process is still further continued by a garden which is to cover the Paillon along the length of the Quai Masséna, the already striking features of this central point of Nice will be greatly enhanced.

THE action for libel between Mr. GASTON L. FEUARDENT and General DI CESNOLA, referred to in these columns last week, has terminated in what is considered to be a victory for the General. The case, it will be remembered, arose out of a dispute as to the genuineness of General CESNOLA's Cypriote antiquities, which had been purchased by the Metropolitan Museum, New York, and the trial, which has just concluded in that city, has resulted in a verdict for the General upon two counts, and the disagreement of the jury on a third, which involved commercial matters in London, and constituted a technical issue altogether subsidiary to the main question.

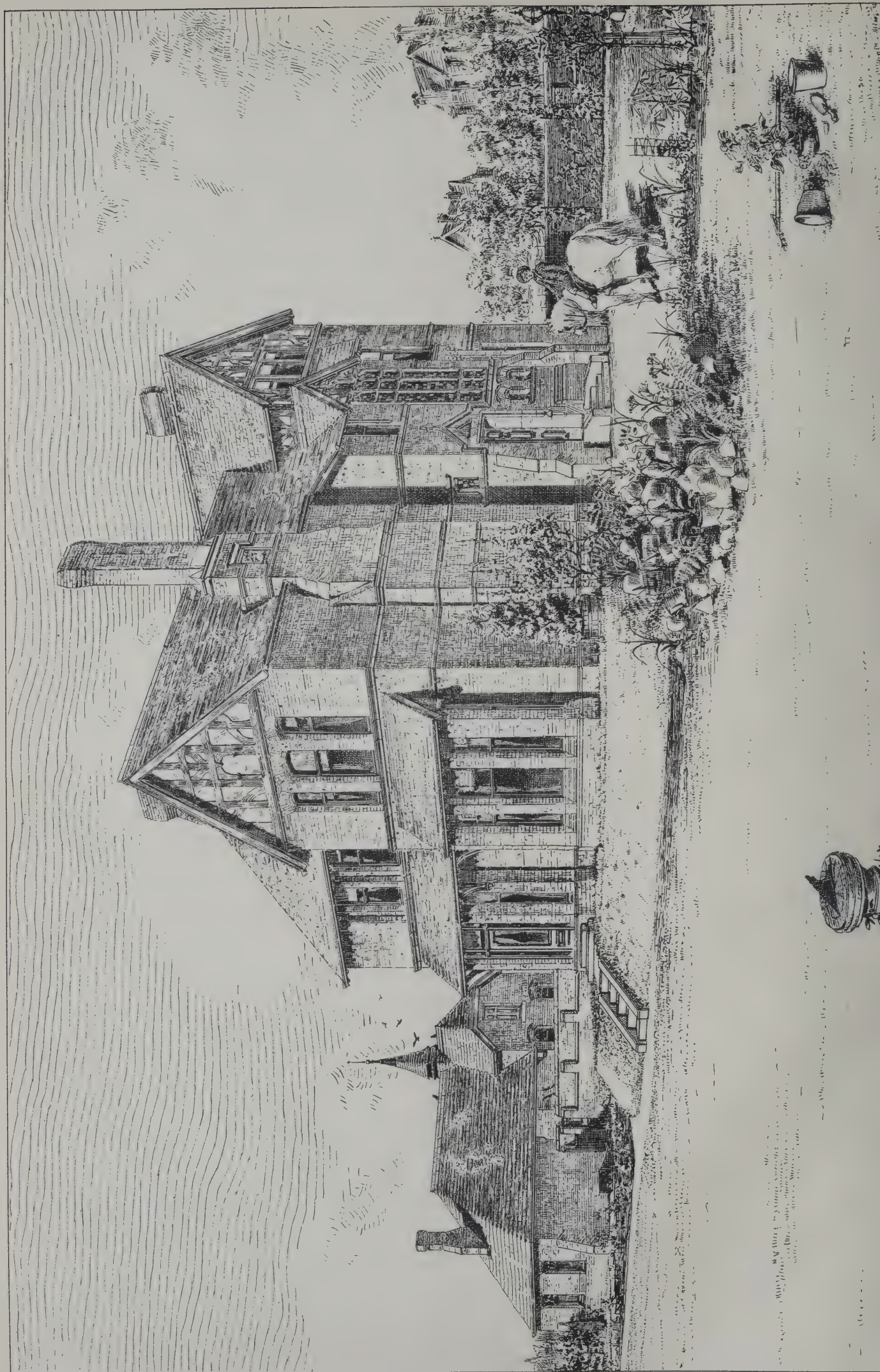
AN interesting Art Exhibition is to be opened in Cardiff on the 14th inst. Unlike the majority of those which are held throughout the country, it will be independent of South Kensington. The aim of the promoters is to have an exhibition of local art, including portraits of celebrities and pictures from Welsh houses. The artists of Wales have responded to the invitation of the committee, and there will be an excellent collection of works in oils and water-colours, illustrative of Welsh scenery and Welsh life. The pictures are proof that there is a local school, and, in the course of a few years, we may expect to see Welsh art holding its own against Scottish art, especially in landscape painting. There will be a great many interesting works belonging to a past time. The Marquis of BUTE will lend several family portraits, and the committee could have had all the treasures belonging to Earl CAWDOR instead of a selection from them. But the desire of the committee has been to make modern art paramount, and antiquities like Hirle's Horn—which was a gift from HENRY VII.—or such things as the examples of Swansea and Nantgarw china are merely subsidiary to that end. The Cardiff architects, and especially Mr. SEWARD, have been working hard to secure success for the exhibition.

ACCORDING to the late Lord LYTTON, "the pen is mightier than the sword," and the opponents of the projected extension of the Skipton and North-Eastern Junction Railway would appear to consider it mightier than engineers, parliamentary agents, and counsel, when we see them going all the way to Florence to invoke the aid of "OUIDA's" pen against the line to Aysgarth Force. The place has been immortalised by TURNER; it is one of the wildest spots left in England, and the dalesmen of the neighbourhood would preserve it from the embankments and bridges of the modern contractor. "OUIDA" is as inimical to the railway engineer as Mr. RUSKIN himself, and according to the novelist every engineering work is accompanied by "havoc, dirt, smoke, and general ruin of grass and trees, of streams and atmosphere." There is some truth in the allegation, for railway engineers are not given to scruples about the inconvenience of their work to other people, although, according to Sir FREDK. BRAMWELL, the great failing of the profession is excessive modesty. Already railways have done irretrievable damage to English scenery, and, knowing this, would it not be well if henceforth all railway Bills were scrutinised by a special committee, whose office would be to preserve as much as possible of the picturesque in England?







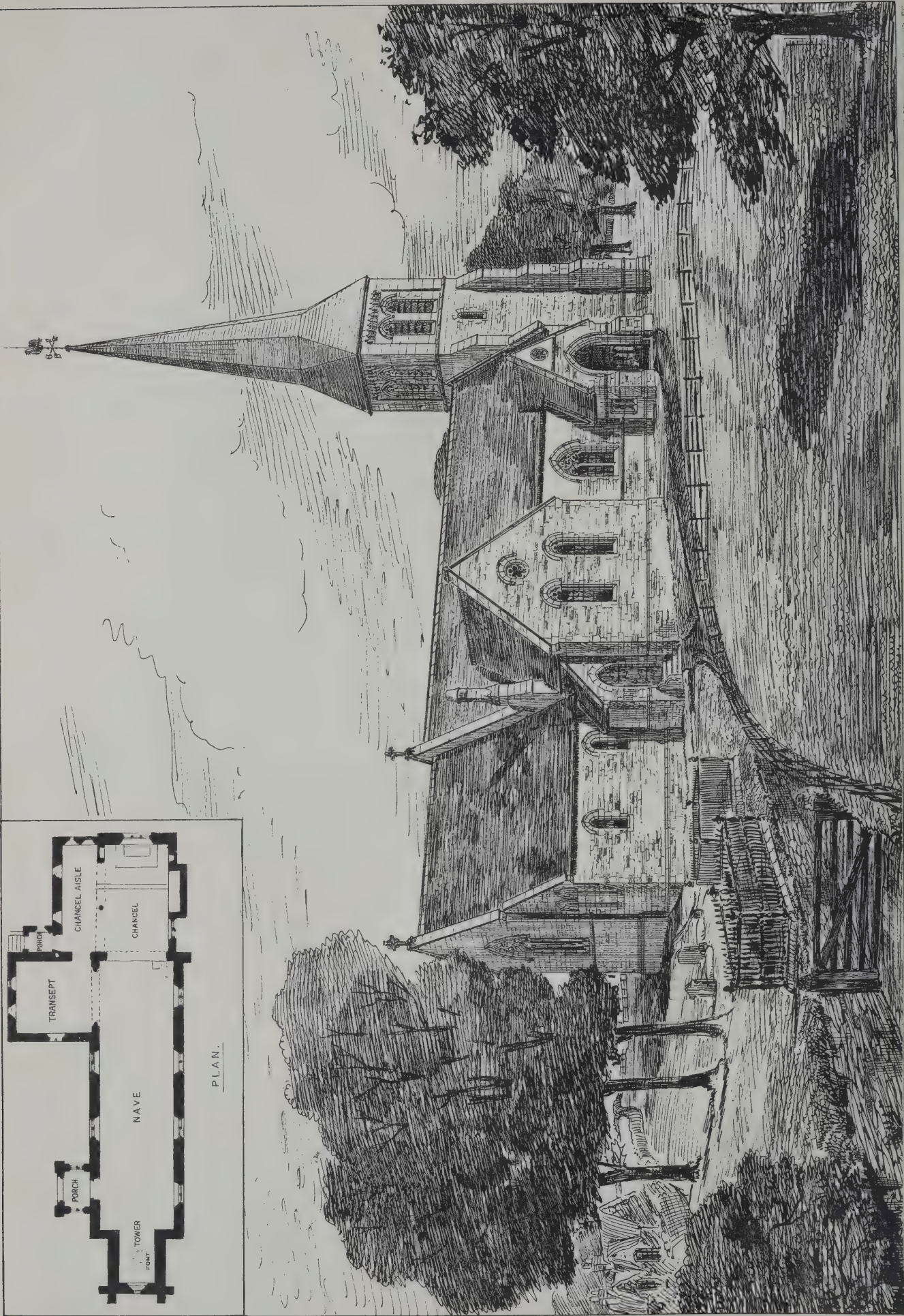
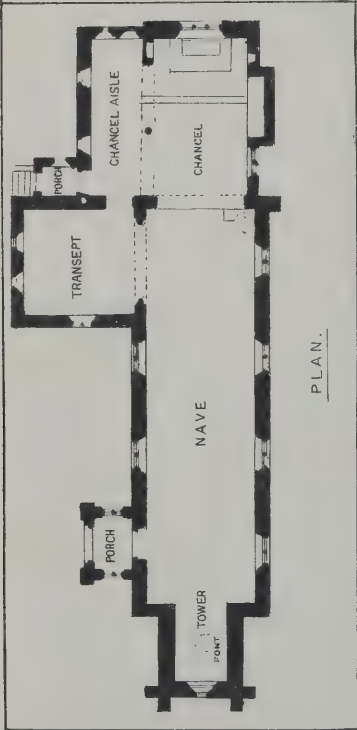


HOUSE AT SALE, CHESHIRE.  
FOR J. H. LYNDE ESQ.  
CHAS. H. HEATHCOTE, ARCHT.







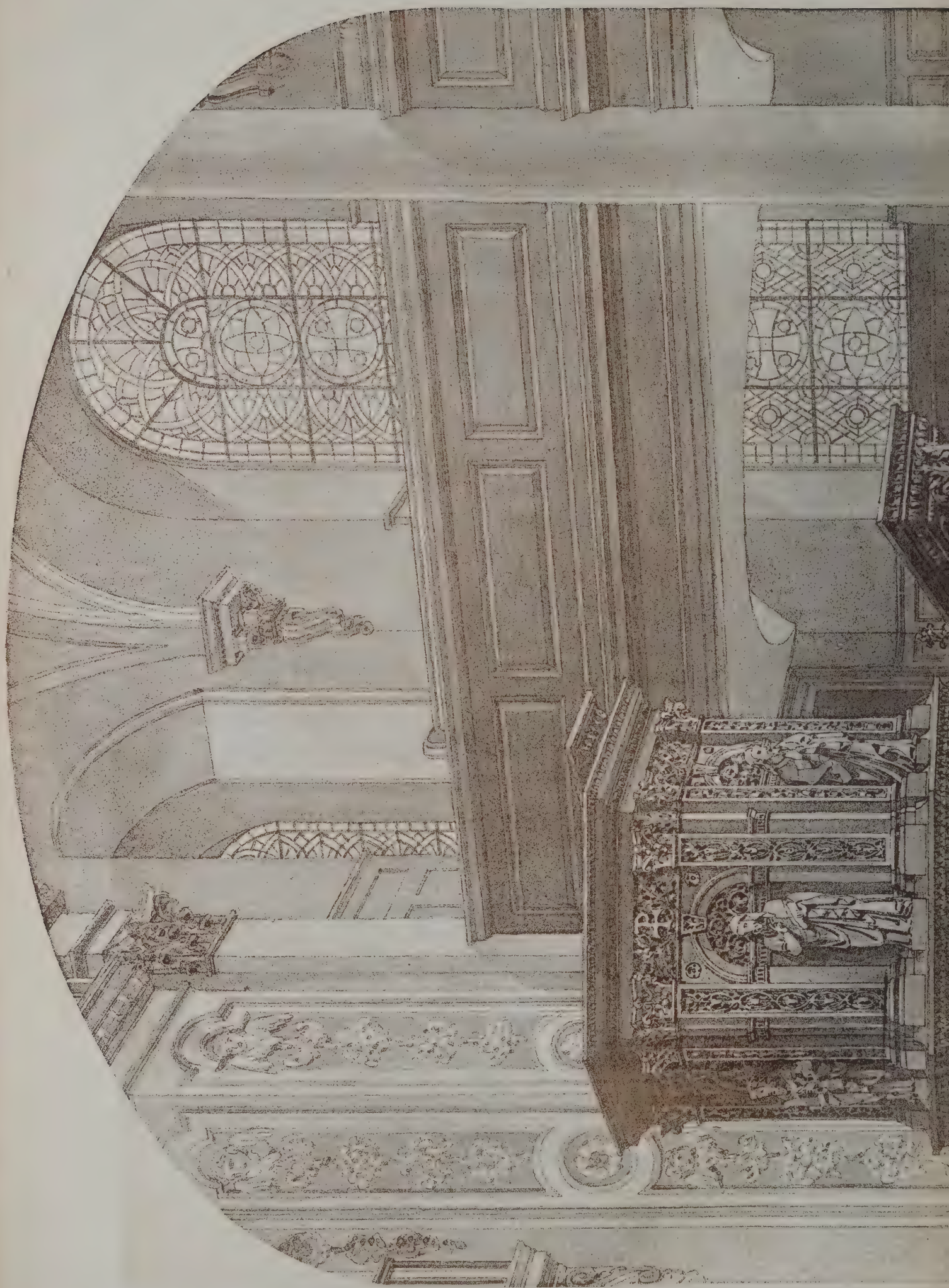


ST. MARY'S CHURCH, HOPE UNDER DINMORE.  
FREDERICK R. KEMPSON, FRIBA. ARCHITECT.

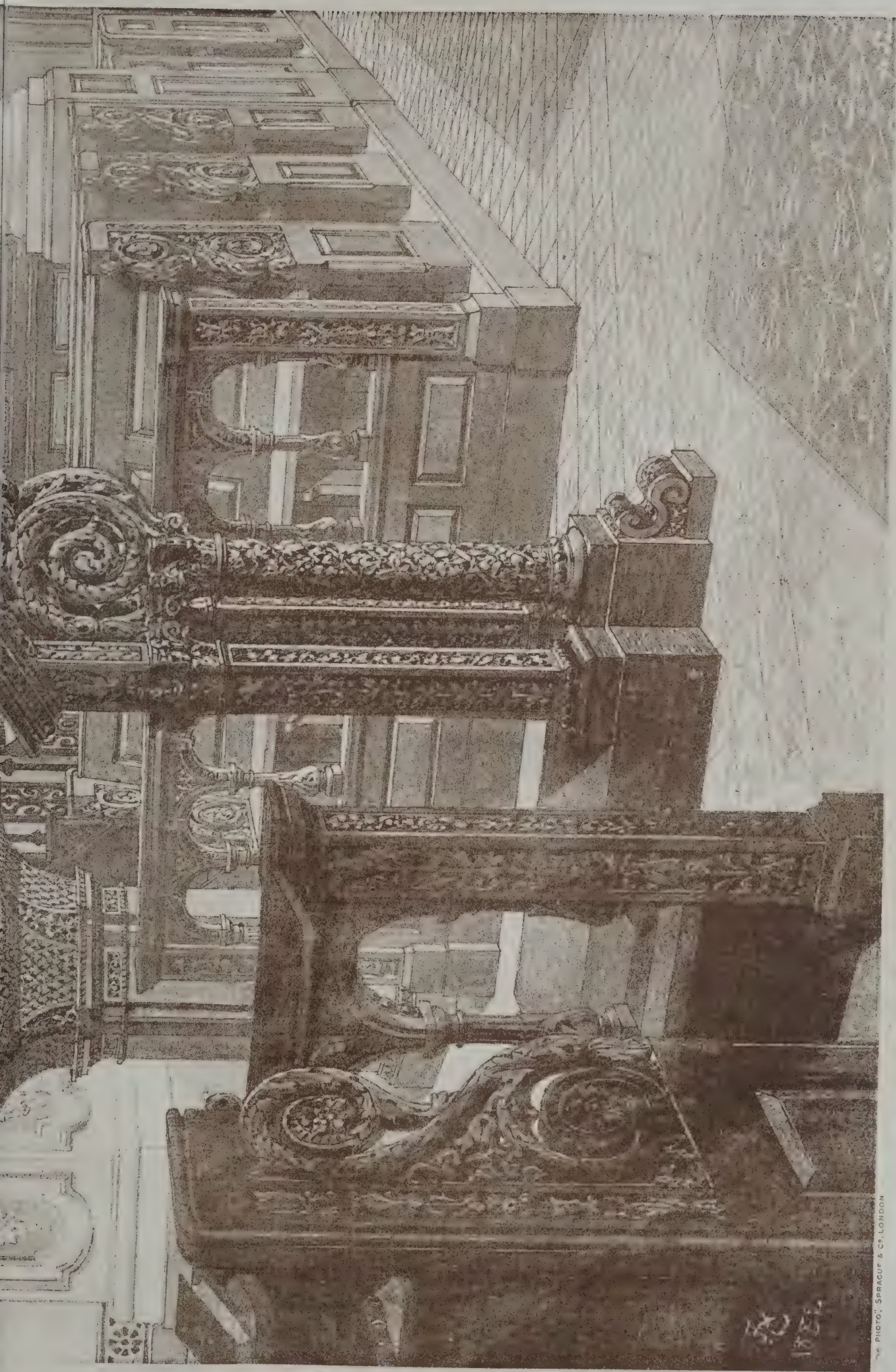










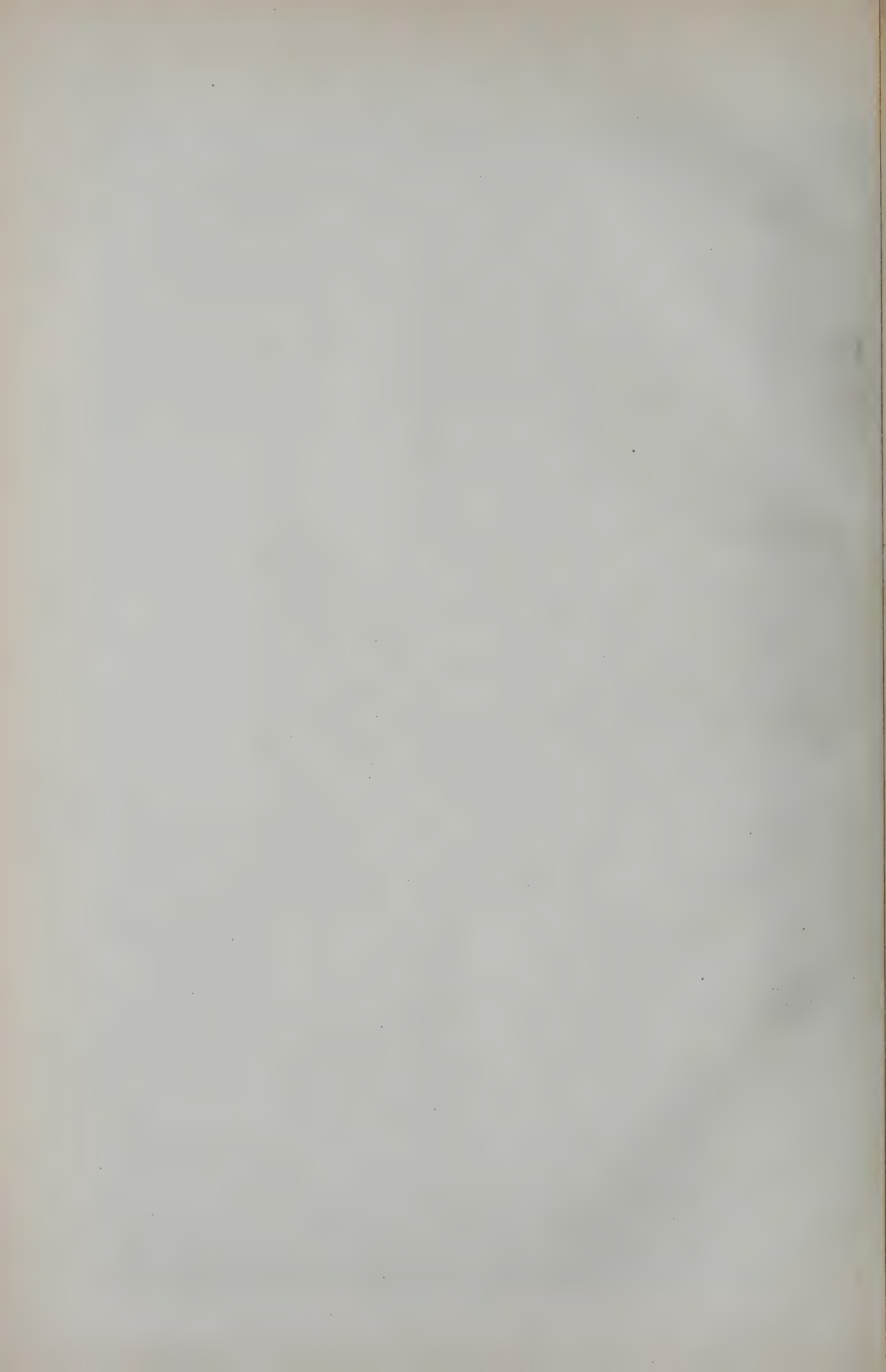


THE PHOTO, SPRACUE & CO. LONDON

PULPIT, LECTERN AND CHOIR SEATING. ST. PETERS CHURCH, VERE ST. OXFORD ST. W.

JAMES H. COLLING, FRIBA. ARCHT. TECT.









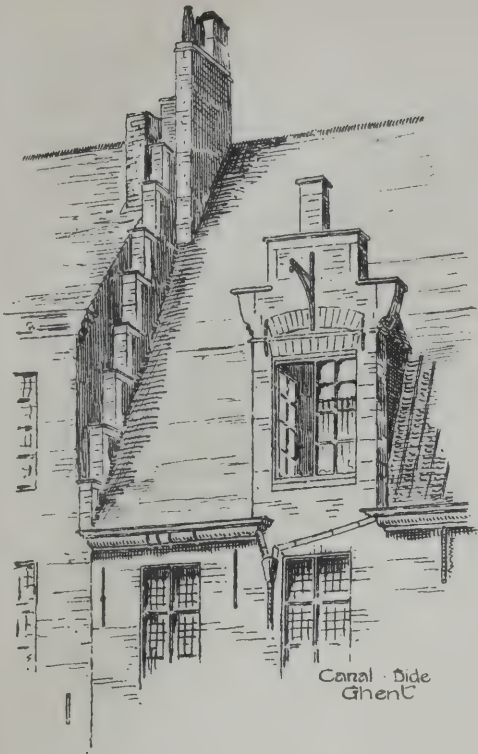
ST PETERS CHURCH, PRESBYTERY & SCHOOLS, SOUTHBANK, MIDDLESBROUGH.

MARTIN CARR, ARCHITECT.









Canal - Side  
Ghent



Ghent.



Place St Pharaide  
Ghent.



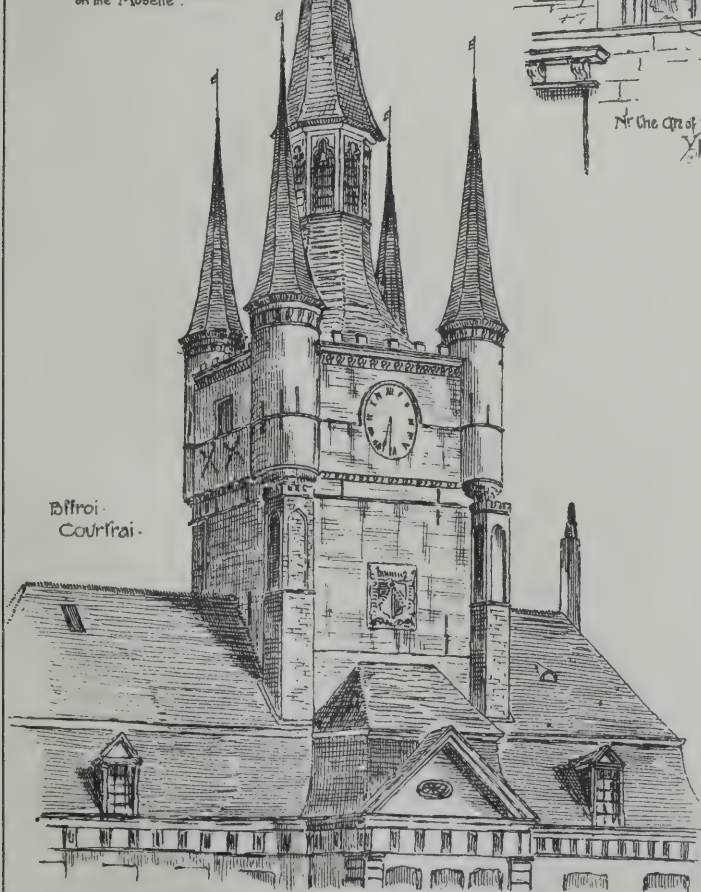
Landorf  
on the Moselle.



At the top of St Martin's  
Ypres.



Rue des Francs.  
Bruges.



Belfroi  
Courtrai.



St Gangolph.  
Trèves.  
on the Moselle.

## CONTINENTAL SKETCHES.

BY T. BUTLER WILSON







## ILLUSTRATIONS.

ST. PETER'S CHURCH, VERE STREET, OXFORD STREET.

THIS church, which was erected somewhere about the year 1730, was the work of JAMES GIBBS, the architect of St. Martin's-in-the-Fields and the Radcliffe Library at Oxford. Internally it is divided into nave and aisles by Corinthian columns and arches, with a recessed east end, very much after the manner of St. Martin's Church, although much smaller. Externally it is a very plain and somewhat dingy brick structure. It was filled with common deal high pews, with upright backs of a most uncomfortable description, when the present incumbent, the Rev. WILLIAM PAGE ROBERTS, M.A., came to the living. He determined that as soon as funds could be provided he would clear away the old fittings, which were quite unworthy of the church, and substitute open oak seating, with pulpit, &c., of a character in accordance with the architecture. This has now been carried out under the superintendence of Mr. JAMES KELLAWAY COLLING, F.R.I.B.A., and the result has been eminently successful.

As evidence of this, we now give a view of the new pulpit, lectern, and choir seats, which is a facsimile of Mr. COLLING's own drawing. The pulpit, which is hexagonal, is composed of niches, flanked by carved pilasters, supported on a pilastered pedestal. The carving is designed from natural foliage conventionalised. The niches are filled with figures of Our Lord, St. PETER, St. JOHN, St. PAUL, and St. MATTHEW, after those by THORWALDSEN in the church of Notre Dame at Copenhagen, these examples having been followed by the special wish of the incumbent.

The lectern, which is a very elegant and richly-carved work, was the gift of the Lady CAROLINE KERRISON. It consists of a triple arrangement of one round and two square columns, elaborately carved, from which springs a beautiful double scroll supporting the front of the book-board.

The choir seating has bench ends with bold open-carved scrolls of elegant design. The type of work adopted in the carving has been very much after the manner of the oak carvings of GRINLING GIBBONS, when carved out of the solid, and not afterwards applied, as was the case with so much of GIBBONS's work. In designing the carving Mr. COLLING has freely resorted to nature, which he has for so many years closely studied, but it has been rendered very skilfully with that conventional delicacy which is so characteristic of the best period of the Italian Renaissance.

The whole has been most faithfully executed, from full-size drawings made by the architect, by Messrs. CORNISH & GAYMER, of North Walsham, Norfolk, builders and architectural carvers, with the exception of the figures occupying the niches of the pulpit, which were the work of Mr. JAMES FORSYTH, sculptor.

The interior of the church was also decorated by Messrs. J. & J. KING, decorators, of Norwich, under the architect's superintendence. The east window, the gift of Lady DE BLAQUIERE, erected in memory of her husband, was executed by Messrs. MORRIS & Co., from the designs of Mr. BURNE JONES. This gentleman has also executed a painting of the *Entombment*, which fills the centre panel of the reredos. The flank windows of the church, which are filled with ornamental leaded and tinted glass, were executed by Messrs. PEPPER & Co., of the Euston Road, and the sunlights by Messrs. STRODE & Co. The organ was removed from the west gallery and re-erected at the east end, with considerable additions, by Messrs. HILL & SON, the organ builders.

ST. MARY'S CHURCH, HOPE-UNDER-DINMORE.

THIS church, which was altogether a modern building erected about fifty years ago, has lately been partly rebuilt, from the designs of Mr. F. R. KEMPSON, F.R.I.B.A., 7A Whitehall Yard, London, and Hereford. The nave, north porch, and transept are already finished. The tower will be cased with new stonework, and surmounted by a shingle spire. The chancel will be entirely rebuilt. The church consists of nave, 66 feet by 18 feet 6 inches; chancel, 28 feet by 16 feet; chancel aisle, 28 feet by 9 feet; transept, 19 feet by 18 feet. The contractor for the portion of the work already done was Mr. HENRY WELSH, of Hereford. The living is a rectory under the patronage of Mr. G. H. ARKWRIGHT, of Hampton Court, Leominster.

RESIDENCE AT SALE.

WE publish this week a view of a house at Sale, Cheshire, erected for Mr. JAMES H. LYNDE. The house stands well back from the road, and contains three entertaining-rooms and a study, seven bedrooms, &c. The entrance-hall is about 15 feet square; out of it runs the principal staircase. The whole house is cellared. Internally, stained pitch pine is used throughout; externally, the bands, sills, jambs, &c., are in terra-cotta. The roofs are tiled. There is stabling at the back for three horses. Messrs. WILSON, TOFT & HUNTLEY, builders, carried out the works, from the designs and under the superintendence of Mr. CHARLES HEATHCOTE, architect, Manchester.

ST. PETER'S CHURCH, PRESBYTERY AND SCHOOLS, SOUTH BANK, MIDDLESBROUGH, YORKS.

THE buildings, shown in our illustration, have recently been erected on the Middlesbrough Road, South Bank, a populous rising town near Middlesbrough, Yorkshire, for the Very Rev. Canon HOLLAND. The church consists of nave and sanctuary (already built), with south aisle and tower (not built). Extreme length 102 feet, width 38 feet, giving 544 sittings. Adjoining the church is the presbytery and sacristy, built of local red bricks and stone dressings. There is also a quantity of terra-cotta ornaments, manufactured by Mr. JABEZ THOMPSON, of Northwich, Cheshire; the stained glass over transom lights was supplied by Mr. KNOWLES, of York. The external walls are built hollow, 17 inches thick; and the floors are carried on fitch girders; the hall and passages are laid with MINTON tiles, and staircase landings with oak parquetry. The presbytery contains seventeen rooms and small conservatory.

On the opposite side of Middlesbrough Road are the schools, a plain substantial two-storey building for 350 children, the only attempt at ornament being a carved stone niche, with figure of *Madonna and Child*.

MESSRS. CRAGGS & BENSON, of Stockton-on-Tees, were the contractors; Mr. BULMER, of South Bank, acted as clerk of the works; and Mr. MARTIN CARR, of Middlesbrough, was the architect.

CONTINENTAL SKETCHES.

THESE sketches, with the exception of the Tower of St.-Gangolph, Trèves, are all taken from the old Flemish cities. The dormers are given as examples of that wealth of charming brickwork which lines and breaks up the façades of canal and street alike. The Early Renaissance dormer from Ypres is of stone. The Beffroi de Courtrai, which is in the Groote Markt, or Grande Place, opposite which the Town Hall rises, is of red brick mellowed with time, and forming a nice grouping amongst the surrounding buildings.

## THE ARCHITECTURAL ASSOCIATION.

THE sixth ordinary meeting of the Association was held on Friday evening, the 1st inst., Mr. Cole A. Adams, President, in the chair. A visit, it was announced, would take place on Saturday, the 9th inst. (to-day), to Harrington Gardens, new houses designed by Messrs. Ernest George & Peto. The death of Mr. John Henry Parker was announced.

Mr. JOHN D. CRACE then read a paper as follows:—

## On Colour Decoration.

In laying down rules for practical decoration, the subject must be divided under various heads. There are certainly rules which are generally applicable, but there are also those which must be applied under conditions of limitation. Among the latter must be classed those which concern the purpose of the room or building, the style of architecture employed, and the manner of lighting both by day and night.

Let us take first the rules of general application. Under this head may be ranked those which affect the expression of proportion and of form, and those which concern harmony of colouring.

That the proportions of any interior may be very largely affected by the scheme of decoration is, of course, very well known to you, as are also, no doubt, a few of the broader rules bearing on this axiom. It may also not have escaped your observation that they are constantly disregarded, even by architects, when they dabble in colours, who seem too often to be carried away by a love of some particular arrangement of wall surface; sometimes a wide frieze, at others a high dado being indispensable to their content,



whatever the height or size or style of the room. Now, I shall ask you to make it your fixed rule to begin by considering the size, proportion, and other conditions of your room, and then to determine whether it is desirable to express or add to its apparent height or its apparent width and size. You can, if necessary, considerably increase either, but not both. It will generally be found that, speaking broadly, what you add to one you take from the other. When this point has been decided you will find it a much easier matter to deal consistently with the arrangement or division of the surfaces presented to you. Observe, I by no means insist that a room must be made to look higher, but I do insist that you should know whether you intend it to look higher or not, and that your distribution of surface decoration should not be entirely regardless of proportion.

It is a very common fallacy that to colour a ceiling is to lower it. Still more often is this result expected if projecting ribs or mouldings be added to divide the blank surface. Yet it may easily be shown in argument, as it is constantly exemplified in practice, that the opposite effect is quite as often produced, colour being the determining agent. Let us assume the walls of a small private library, 12 feet high, to be hung with one of the embossed leather papers now in frequent use, the pattern brown and gold on perhaps a warm green ground; the bookcases below, of oak or walnut wood, with their contents, maintaining a quiet similarity of general tone. The cornice is, say, 9 inches deep. If you leave it a light tint and the ceiling plain, the room will appear quite 9 inches lower than it would were the cornice brown like the bookcases. And if this brown is continued on to the ceiling by means of wooden ribs, the room will gain at least another 6 inches in apparent height.

The fact is, that the point at which the attention is arrested by a marked contrast is that by which the eye assesses the height; and, since the mouldings of the cornice project inwards to the room, even more apparent height is gained (than is marked in vertical distance) when the contrast is placed high, since advantage is taken of an apparent perspective.

On the other hand, if it be desired for other reasons to retain the wooden ribs and cornice, yet not to add to the apparent height, a corrective is readily applied in colour, either in the form of a narrow frieze, of sufficiently emphatic contrast, below the cornice, or by contrasted relief of colour at the same point as the cornice itself. Even a line of gilding may suffice.

In the same way the influence of a wide frieze or a dado on the proportions of a room is largely controlled by the colouring. A wide frieze may be used of the same colouring, or even of the same depth of tone, as the wall below, without materially affecting the apparent height; but a very small amount of contrast in tone will be sure to tell in the case of a large plane surface. Hence, if a frieze with some contrast be used where height cannot be sacrificed, it is essential to place its brightest contrasts as high up and as near the cornice as possible, lest the eye be arrested at the bottom, and the frieze itself, together with the cornice, be relegated to the ceiling. Some rooms are high enough to bear this sacrifice of wall, in which case they largely gain in apparent width and space.

So much for the horizontal lines, which are the most important; but the vertical lines and the manner of dealing with them must not be forgotten. Perhaps, during the last few years, they have been rather unreasonably ignored. Of course "pilasters" are not always essential or desirable—in many rooms they are absolutely out of place—but your modern "art decorator" seems to have forgotten that such a feature is available anywhere; and your modern "lady of taste" hears you utter the word "pilaster" with the same suppressed emotion which she would exhibit if she heard a sailor swear—she only excuses it as "language belonging to the profession." My advice to you is by no means to discard so useful a means of expressing height or symmetrical arrangement. It is especially useful where you want the dignity of architectural expression in a limited space. In the case of a long unbroken wall pilasters are a useful means of preventing that apparent sagging of the cornice line which is apt to trouble the eye, and which the Greeks were so well aware of as to substitute a gentle curve for the weak horizontal line.

I must be understood, when speaking of "pilasters," to use the word in the decorative sense, not in the architectural. I do not necessarily mean a feature having capital and base. A narrow vertical panel, distinguished from the larger wall-spaces which it divides, is equally a "pilaster" to the decorator. If ornamented, its ornament must have a vertical direction.

There are in most rooms certain features which may be made to aid in the expression of proportion. Such are doors, windows, and chimney-breasts. In nine houses out of ten the dimensions of the door have no relation to those of the room. There are many ready methods of getting over this difficulty, such as the addition of door-head or frieze, with capping moulding; or, in some cases, continuing the framing of the door so as to enclose a panel above it, to be treated distinctly from the other wall-surface. Then, again, the windows may, by the arrangement and colouring of the draperies, be made to distinctly influence the proportion. And so with the chimney-breast, a marked feature in most ordinary dwelling rooms. A sense of size and importance may often be

given by treating the whole breast as a part of the fireplace arrangement, or, at any rate, as a distinct feature. Examples of the effect of such treatment will occur to you in several of the old public buildings of France or Flanders. You remember the magnificent one at Bruges; and this arrangement in various forms occurs constantly in the French palaces and châteaux from the Mediæval periods down to the expiration of the monarchy. In the elegant decorations of the Louis XVI. period, the full height of the wall above the chimney-piece is constantly associated with it in one group, and our own Elizabethan examples are so numerous as hardly to need mention.

I have dwelt thus on the question of proportion as influenced by the colouring and decorative features, because I see it so constantly disregarded, and it appears to me that it should be the decorator's first problem.

After all, it is the ceiling which is in most cases the decorator's great opportunity. Where it is already divided into panels or ornamented in relief his first consideration will be how to do it most justice—to express it in the best way, and to emphasise the right points. Apart from the actual harmony of colouring, the good management of light and dark tones is of the first importance; to give point without producing patches of colour, and obtain a sufficient uniformity of effect without tameness or monotony. It is astonishing how a ceiling may be lifted out of mere flatness by the judicious disposition of its leading lines. If these are rightly expressed, much may be forgiven in minor defects of ornament or colours. The ceilings of the great majority of our rooms are flat, owing to the exigencies of space, no less than to those of cost. Let us, therefore, consider what variety of effect is attainable with ceilings of flat construction.

In the first place, where a perfectly flat plane of plaster is presented, there are the alternatives of treating it with colours alone, or of previously subdividing it by mouldings or relief ornament. The latter treatment is the one which obviously recommends itself where there is not too close a limit of cost, and especially if the area of ceiling be large. It is, indeed, most difficult to treat satisfactorily, with colour alone, a large area of plain flat ceiling, and such treatment should really be limited to ceilings of small dimensions. I will return to this point. The methods of division are numerous enough, and the decorator will be guided by several considerations in deciding on which to adopt. The amount of relief must be determined, firstly, by the height and size of the room, especially by the height, but also by the depth and richness of the colouring intended for the walls. Here, again, comes in the question of the ultimate use of the room; for a light and gay colouring is not compatible with the use of heavy mouldings or deeply-recessed panels in the ceiling. This is one reason why the relief ornament of the ceiling should either be designed by the decorator or in co-operation with him. To be successful it must form a part of the colour scheme. The light and shade of the relief ornament and mouldings are a most important factor in any scheme of colouring.

Like the walls, a ceiling may be so divided and subdivided as to materially affect its apparent length and breadth, and upon the same general principles. This, whether with or without any relief of mouldings, but preferably by their aid. It has already been explained that height is to be given by attracting attention to some feature high up in the cornice; but you may go further, and place your decisive contrast in the margin of the ceiling itself. From this point you may, if the area of the ceiling be square or nearly so, either maintain a flat or horizontal effect, or you may impart to it an appearance of rising from wall to centre.

Where the intention is to maintain the effect of a horizontal ceiling, the principal lines, if firmly expressed, must be distributed with even impartiality over the surface in a design consisting of a repetition of geometric form, or of forms having the appearance of repetition, or monotonous in their degree of relief. Or, again, very marked straight lines, taken from cornice to cornice across the ceiling, will emphasise the horizontal sufficiently. Examples of these are among the illustrations on the wall.

When, on the contrary, it is wished to raise your ceiling in the centre, it will be necessary to take care that your main lines are clearly marked by vigour of relief or of colour contrast, and that their arrangement expresses a growth from sides to centre. Your colouring must be so adjusted as to keep, firstly, the sharpest contrasts to aid in expressing their growth; secondly, the weight of colour gravitating towards the angles. In like manner the ornamentation, whether in colour or relief, should be made to assist in the effect of growth towards the centre—in fact, to flow with the same motive or tendency as it should have were the ceiling actually concave.

It may be useful here to lay down an axiom in reference to moulded ceilings. It is this:—"For light tints of colour, and with bright, gay tones, the relief of moulded surface should be very moderate. Strong relief of moulded surface is compatible with the use of powerful colour in masses, and with dark low tones." It may, moreover, be taken as a general rule for any situation that "strong shadows are incompatible with the use of light tints."

What I have already said as to moulded ceilings applies almost entirely to the distribution and character of the dividing main lines. The ornamentation of the intervening spaces may be left



almost untrammelled by rules, if it but retain a subordinate position, except only where special accentuation of the general design is required.

Now, providing that the surfaces be not too large, precisely the same general rules will apply to the decoration in colour only of plane flat ceilings, without the aid of relief. Lines of expression must be used of colour so firm as to lead the eye with decision, and to take the place of the mouldings whose direction we have been considering. The emphasis yielded by light and light and shade being lost, the whole treatment must be lighter and simpler. A subdivision into monotonous repetitions of form is rarely pleasing in colour only. A greater freedom is, for the most part, desirable. Once the spectator is aware that it is by the brush alone that the surface has been treated, he expects, to some extent, the freedom of hand that the brush suggests. You find this admirably exemplified in the Greek work of Pompeii, and no less in many of the best works of the Renaissance. This freedom applies perhaps more to the treatment of ceilings than of walls; but in a less degree it applies to walls also, if other conditions do not impose some severity of treatment.

It will, as a rule, be found that where a flat ceiling has to be treated in colour only, without any aid of mouldings, it is desirable to maintain white as the ground, or, at any rate, to retain a great deal of white, for without white it is difficult to indicate with sufficient clearness the main lines as distinct from those which have no more serious purpose than ornamentation, that is to say, to distinguish the lines which affect proportion from those which are a part of the detail. This rule does not apply with the same force on curved surfaces, where less artificial suggestion of form is demanded, and where, moreover, gold can be used much more freely should the circumstances admit of it.

(To be continued.)

## THE SANITATION AND RECONSTRUCTION OF LONDON.

AT the meeting of the Society of Arts on Wednesday evening, Sir F. Abel in the chair, Mr. William Westgarth gave a lecture on the "Sanitation and Reconstruction of Central London," with suggestions on the rehousing of the poor. The chairman spoke of the great interest which had been taken in the subject, and the amount of consideration and study which it had received from Mr. Westgarth, who had offered prizes to the amount of 1,200*l.* for essays. Mr. Westgarth began by referring to the attention which had of late been directed to the insanitary condition of the dwellings of the poorer classes of London, remarking that a larger, and a not less pressing, question was the sanitation, the street re-alignment, and the reconstruction of central London, for much larger interests were at stake in it. The rapid growth of London, which was the feature of the century, was much more in the later than in the earlier section of the century. The law of modern progress, exemplified by London, at least, appeared to be geometrical, and not merely arithmetical. The advance of the last ten years seemed to be always greater, actually and relatively, than that of any previous like interval. The difficulty of dealing with the evils of packed central London had, the lecturer remarked, lain in the question of the best kind of agency for grappling with them, but he maintained that it could be undertaken in an ordinary business way, and so as to prove self-remunerative, while the expropriations and other social or business disturbances of such a vast undertaking could be minimised to a great extent. He referred to the irregularity of the plan of central London, and said there was no difficulty in guessing how old London had come down to the present population so oddly parcelled out. There was first a devious pathway through the fields, which broadened into a road, with dwellings and gardens on either side. Then it became a thoroughfare or main street, and eventually it was surrounded by modern streets and squares. As to the insanitary condition of the houses which had thus arisen, Mr. Westgarth remarked that only a few who had given an intelligent attention to the subject could fully realise the terrible condition of London in this respect; to all others it was an unknown and incredible quantity. In speaking upon London as it ought to be he suggested two chief centres, the lesser of the two, comprising the site of St. Paul's, he would distinguish as the art centre; the greater being that great centre of the world's commerce and finance, which was now indicated as the fertile site of the Royal Exchange and Stock Exchange, of Lloyd's, of the Bank of England, other chief banks, and "Lombard Street," of the Mansion House, and of the City branch of the General Post Office. From these centres, but especially from the latter, should radiate all the chief thoroughfares of great London. After detailing the arrangement which might be made for the conduct of business and the centralisation of public offices, he said that as they indulged in the reconstruction in ideas of unprecedented width of streets, they might recompense the sacrifice of accommodation in one direction by seizing upon more of them in another—by giving

greater height to the new buildings. There was plenty of room both "towards heaven above and in the earth beneath," and he thought, in the first instance, they should eject all the old poisoned soil, and, in so doing, institute a new level of construction. An ample subterranean area would give at once business storage and the due facility for availing of all the progress of art and science in the future, in lighting, watering, sewerage, and the application of energy or power in all ways without the heretofore incessant breaking up, over and over again, of the streets. Next they would have a lofty ground floor—so lofty as to allow, without serious reduction of light to that floor, a terrace or upper promenade, with bridged connections for foot passengers, so as to put an end to those countless street dangers and accidents which already cost to London and its suburbs the yearly sacrifice of 270 lives. This level, as well as that of the ground, would have its shops and traffic to swell out a remunerative rent-roll. Continuing in the ascent through successive floors of offices or dwellings, until the public lift land, without fatigue, upon the roof. This was something entirely new to London experience, and possibly to any other as yet, but entirely attainable under a systematic reconstruction. In short, the roofage of the chief streets would be a public promenade, a continuous park or garden.

## LYCIAN ART.

IN the fifth lecture on Lycian art delivered at University College, Professor Newton first described the great tomb in the Lycian Room of the British Museum, which is commonly known as the Chimæra Tomb, because on both sides of the roof is a relief representing Bellerophon slaying the Chimæra. The myth of Bellerophon was a favourite subject in ancient art, and we have many representations of it on vases, sculptures, and coins. A good list of these is to be found in a memoir by Engelmann in the *Annali* of the Roman Institute for 1874. Bellerophon was a descendant of the Corinthian Sisyphos, and fled from Corinth to Argos on account of an unintentional homicide. Proitos, king of Argos, received the fugitive, but afterwards, through unfounded jealousy on account of his wife Anteia, sent him to his kinsman Iobates, king of Lycia, with secret instructions to put him to death. Iobates, instead of carrying out this instruction, sent Bellerophon on three dangerous missions, first to slay the Chimæra; then to subdue the Solymi, a people of Semitic race dwelling in the mountains on the eastern frontier of Lycia; and lastly, to attack the Amazons. Bellerophon coming back victorious from these dangers married the daughter of Iobates, and succeeded him on the throne of Lycia. He was in after times pre-eminently the national hero of Lycia, and we find on Lycian tombs two other representations of his slaying the Chimæra. That fabulous monster was composed of a lion, out of whose back grew a goat's head, with a serpent as a tail; flame issued from its mouth. According to ancient authors under this strange form was typified a mountain east of the Solymi, out of which issued a perpetual flame. The spot where this phenomenon existed is accurately marked by the geographer Scylax, who says that it was on a mountain overlooking the port Sideros on the eastern coast of the Lycian peninsula. A temple of Hephaistos stood here. Following the indications given by Scylax, Sir F. Beaufort, who surveyed the Lycian coast at the beginning of this century, had no difficulty in discovering this perpetual fire at a place called Yanar by the Turks. In his "Coramania" Beaufort describes this fire as a stream of gas issuing from a cleft in the rock, which produces very little smoke, and of which the heat has little effect on the vegetation around. The Turks use the soot from it as a remedy for diseases of the eyes. This spot was afterwards visited by Spratt and Forbes and also by Mr. Albert Berg, a German artist, who was sent by the King of Prussia in 1854 to explore Lycia, and who has contributed a short memoir on the Yanar, with a sketch of the rock from which the gas issued, in the *Zeitschrift für allgemeine Erdkunde*, Berlin, 1854. Forbes states that at the place where the gas issues forth limestone and plutonian serpentine are in close contact. The lecturer then described the sculptures of tombs in several other Lycian cities, casts of which were taken in the course of Sir C. Fellows's expedition. At Myra is a tomb of which the front is an imitation of the kind of wooden structure which Fellows compared to the square-headed windows of Elizabethan architecture. The interior is composed of an inner chamber in which the interment took place, and a portico or ante-chamber, on the sides of which and on the rock outside were figures, male and female, larger than life. These were all originally coloured, as may be seen by reference to the plates in Fellows's "Lycia." They are also engraved in Texier's "Asie Mineure." The lecturer then noticed the sculptures on tombs at Tlos, Pinara, and Cadyanda. The reliefs on all these tombs contained a combination of battle scenes with domestic and peaceful scenes. On a tomb at Cadyanda was sculptured a family group; the composition, as drawn by Mr. G. Scharf, as the frontispiece of Fellows's "Lycia," was of singular beauty, but the cast of this group in the Lycian Room at the Museum does not convey the same impression of refined sculpture.



## DRAWINGS OF THE TWEED.

THE Royal Association for the Promotion of the Fine Arts in Scotland, which since 1833 has expended 200,000*l.* in furtherance of the objects it has in view, has resolved to celebrate the fiftieth anniversary of its foundation by the publication of a subscription work of more than common importance—a series of engravings of “The Tweed, from Source to Sea,” after drawings by Mr. G. Reid, R.S.A. During the past summer this artist has visited the locality on two separate occasions. Residing at the various little country inns which border at intervals this historic stream, he has executed an extensive series of large pencil sketches, each taken on the spot which it depicts. Sixteen of the most striking of these subjects have been selected as the illustrations of the forthcoming volume, and the renderings of Mr. Reid’s pen-drawings are to be reproduced direct by M. Amand Durand, of Paris. Three of the plates have already been engraved. In the first are seen the small beginnings of the stream amid the loneliness of the hills at Tweed’s Well; in another is the Bridge of Kelso mirrored in the calm of the river; while the third shows a terraced foreground which overlooks the venerable Gothic pile of Melrose. The other subjects are to include, among the rest, Tweedsmuir with its church, the Vale of Tweed-Boughton, Neidpath Castle, Ashestiel, Smailholm, Norham, and, finally, a view of the river’s ending as it seeks the sea beneath the walls of Berwick. The letterpress of the volume has been entrusted to Professor Veitch, of Glasgow, and each illustration is to be inscribed with a few lines, marking the associations of the place, from the old songs and ballads by which the nameless minstrels of the district have linked the scenes to memories of human deeds and human sorrows.

## THE SIMPLON TUNNEL.

THE following details of the proposed Simplon Railway are taken from a description furnished by a correspondent at Geneva. It is one of two schemes involving a sub-Alpine tunnel, the rival scheme being one for piercing Mont Blanc. Railway lines both on the north and south sides of the Simplon are already completed. The tunnel which it is proposed to pierce through the Simplon will be not far short of eighteen miles in length, and consequently the longest tunnel in the world.

The first practical steps towards the commencement of the work may be said to have been taken during the winter of 1876–77, when experiments were carried out with a view of determining, both on the Swiss and Italian side, the amount of hydraulic force that would be available for the boring-machines as well as for purposes of ventilation. On the Swiss side this force will be derived from the waters of the Rhone, and on the Italian side from the Diveria. These experiments, which were continued in 1882, tended to prove that even in the depth of winter, when the motive power is at its lowest, the engineers will have at their disposal at each end of the works hydraulic forces equal to about 6,000 effective horse-power. It is calculated that this force will not only enable them to pierce rapidly, but that an efficient system of ventilation can be maintained. On account of the great length of the tunnel this question of ventilation is one of importance.

At 6,500 metres from the north head of the tunnel a shaft will be sunk about 1,000 metres in depth, and sloped at an incline of about 45 degrees. At 5,300 metres from the south end a similar shaft will be sunk, having a depth of 680 metres. The bottoms of these two shafts will be connected by a vaulted gallery several metres above the line of advancement of the tunnel. As the work of boring proceeds an opening will be effected between the tunnel and the gallery, and consequently there will be a direct communication with the outer air. As the workmen cut their way further into the earth, a new opening into the gallery will be made over them, and the one behind will be closed. The men will thus always have over their heads a shaft through which the foul and poisonous gases will escape. As it frequently happens, however, especially in the high Alps, that under certain atmospheric conditions, the upper air becomes so dense that the gases from the earth do not rise quickly, it will be necessary to have at the head of each shaft a mechanical arrangement which may be described as a series of gigantic suckers. These suckers will be constantly at work drawing up the foul air, while from the openings at each end of the tunnel hydraulic power will ceaselessly pump in fresh air. By this system it is expected that the temperature will be kept down to a fixed point, and a comparative state of atmospheric purity maintained. Should it be found on application that the arrangement described is insufficient to obtain the desired object, the temperature will be lowered by running streams of iced water, and large quantities of quicklime will be introduced into the tunnel to absorb the humidity of the air. It is also decided that the electric light shall not only be used for all purposes of illumination, but that the locomotives necessary for drawing the waggon loads of *débris* shall derive their motive power either from compressed air or electricity.

To obtain the easiest declivities on the Italian side, where

there is a great fall, the south end of the tunnel will debouch at the lowest altitude possible. Consequently there will be a very steep incline from the centre of the tunnel towards the south. The north end will debouch in the alluvial plain formed by the deposits of the Rhone, exactly opposite the little village of Masseggen, and at an altitude of 689 metres above the sea. This end will be about an eighth of a mile from the present station of Brigue. Subject to variations in the plans which further study and surveys may suggest as being advisable, the following is a description of the line as planned by M. Meyer, chief engineer of the company. Leaving Brigue, it will pass through a short tunnel and rise to the entrance of the great tunnel, which, as already stated, will be opposite the village of Masseggen. At 6,000 metres from the entrance it will pass under the valley of the Gauthier, near Berisal, the pleasant little village so well known to summer tourists who cross the Simplon. This same valley of the Gauthier bears a very evil reputation for avalanches. The train, however, will have nothing to fear from avalanches, as it will, at this point, be 700 metres, not far short of half a mile, below the surface of the earth. Near the culminating rise in the tunnel, and when some distance to the north-east of the position of the Hospice, the frontier between Italy and Switzerland will be crossed. And here the traveller will have above his head the mighty mass of Monte Leone, 11,696 feet, with its glaciers, one of which is pierced by a gallery at the present day, to allow the road to pass. From the culmination there will be a long run, all down hill, to the south opening, above the village of Iselle. From the south end of the tunnel to where the line will join the Italian railways, there will be thirty-five tunnels, having a total length of 9,667 metres, or a little over 30 per cent. of the entire length of the line. The shortest of these tunnels will be 40 metres, and the longest 2 kilometres 40 metres. Several of them will be simply galleries cut through projecting rocks. There will be twenty-three viaducts measuring in the aggregate 1,423 metres, or nearly 5 per cent. of the total length of the line. The length of these viaducts vary from 23 metres to 136 metres. There will be twenty-four signalling stations placed at intervals of about 1,300 metres, and numerous passenger stations at short intervals. From Domo d’Ossola the line will run due south as far as Piedimulera. It will then turn east to Pallanza, on the north-west elbow of Lake Maggiore. Thence it will skirt the lake to Arona, where it will connect with the Italian lines.

## BRISTOL JUNIOR ARCHITECTS’ SOCIETY.

THE annual dinner of the Bristol Junior Architects’ Society was held on Tuesday evening. Mr. J. C. Moncrieff, vice-president, presided in the absence of Mr. C. F. Hansom, and among those present were Messrs. F. B. Bond, R. C. Sconce, W. G. Hill, J. M. Froud, E. C. Howell, G. G. Macpherson, R. Cridland, G. E. Ford (hon. sec.), &c. The usual loyal toasts having been proposed, Mr. Macpherson gave “The health of the President of the Society, Mr. Hansom,” which was responded to by Mr. Ford. Mr. Hill, submitting the toast of “The Junior Architects’ Society,” expressed a hope that the society, which was established in 1881, would continue to prosper in its career of usefulness. Mr. Froud responded. Mr. Ford proposed “The Vice-Presidents,” coupling with the toast the name of Mr. Moncrieff. In replying to that toast Mr. Moncrieff expressed a hope that jealousy would be lost sight of in connection with the society, and that their association would join the junior members together, so that they would all work harmoniously. In their society they had draughtsmen whose work could not be surpassed in any London office, and papers had been written by their members, which had been most favourably criticised by the architectural journals. Referring to the Omnibus Bill of the Bristol Corporation, the speaker said one clause in it would prove extremely useful if adopted—that which bore upon the class of material used in the erection of buildings.

## EDINBURGH ARCHITECTURAL ASSOCIATION.

A MEETING of this society was held on Wednesday evening, Mr. John McLachlan, past President, in the chair. Mr. Thomas Hume, of Messrs. Morrison & Hume, Edinburgh and Lasswade, read a paper entitled “Practical Plumbing,” in the course of which he pointed out that the plumber’s trade had undergone great changes during the last thirty years. Lead, which was the material almost exclusively used by the plumber at that time, has been largely supplanted by zinc, iron, and copper, and the diverse natures of these metals has tended to produce deterioration in the quality of the workmanship. It was shown that there are many scientific questions involved in the execution of plumber-work, and this great fact renders it specially essential that the plumber, to be an intelligent workman, should have a technical education, and this, fortunately, may easily be obtained. The limited time at the disposal of the lecturer permitted of his merely



touching in a cursory manner a few of the more salient points connected with the trade, such as on those forces which tend to produce decay, as also on those things likely to secure the most perfect work. The lecture was divided into three heads, viz.:—I. Roof or outside plumber-work; II. Inside plumber-work for storage and supply of pure water; III. Plumber-work for conveyance and removal of sewage and foul water. Models and diagrams were produced illustrating the different kinds of work, and more particularly the principle and arrangement of hot-water apparatus, the efficiency and ventilation of soil-pipes and waste-pipes, and the best forms of water-closets, flushing apparatus, and other fittings. At the conclusion a cordial vote of thanks was accorded Mr. Hume.

### FEMALE SCHOOL OF ART, BLOOMSBURY.

THE medals and prizes were distributed to the pupils of this school, on Wednesday evening, by the Countess Granville. The report, read by the honorary secretary, Mr. Francis Bennoch, stated that a pupil of the school had again won a national gold medal, and that others of them had gained two national silver medals, five national bronze medals, and seven national Queen's prizes. These honours had been won in competition with 164 schools of art, from which 926 works were accepted for the national competition. These 15 awards were obtained by 14 students, as compared with 11 awards gained under similar conditions by 10 students last year. The records of successes for the 18 years 1866-83 showed that the national awards to this school included seven gold medals, 25 silver medals, 43 bronze medals, and 66 Queen's prizes. During the past year 192 students had received instruction in the school, and on April 9 2,022 drawings, paintings, and three models were forwarded to South Kensington. These were the work of 129 students—an average of ten works for each. With regard to former students, the committee were able to give an excellent report of those who had joined the chromolithographic studio, which was successfully started in connection with this school in February last by Sir Philip Cunliffe-Owen. The director, M. Faustin, reported that these students excelled in truthfulness of drawing and delicacy of treatment of natural flowers, foliage, and landscape; that they had shown special aptitude for the work, and in three months had overcome technical difficulties which ordinary apprentices would take two or three years to master. Before the proceedings terminated a resolution was passed to take steps to purchase the adjoining premises, for the extension of the school, which had become necessary.

### THE NATIONAL ASSOCIATION OF MASTER BUILDERS.

ON Wednesday, January 30, at the Alexandra Hotel, Bradford, there was held the first meeting in that town of the National Association of Master Builders of Great Britain. After the report and accounts had been passed, a discussion arose with regard to forms of contract and tenders, and the mode of making out quantities; and it was decided to appoint a sub-committee to confer with the committee of the Royal Institute of British Architects upon the point. Mr. Stanley Bird, of London, was re-elected president of the association for the forthcoming year; Mr. Cowlin, of Bristol, and Mr. Neill were re-elected vice-presidents; and Mr. J. C. White, of Liverpool, treasurer.

In the evening the Bradford Master Builders' Association entertained the delegates to dinner at the Alexandra Hotel, more than eighty persons being present, and Mr. John Beanland, of Bradford, presiding.

After dinner the customary loyal toasts were drunk, and the chairman proposed the "National Association of Master Builders." He said that the association began its existence at Birmingham, and had gradually increased in importance. He hoped that the representatives of the association, which met in Bradford for the first time under its present name, would go away satisfied with the Bradford builders, and that the local association would be convinced that there were advantages to be derived from joining the general one which could not be gained in any other way.

Mr. Stanley Bird responded on behalf of the association, and said that it was principally through the efforts of Mr. Beanland that the National Association had its birth. He also referred to the advantages to be derived from the connection of a local organisation with the National Association, and pointed out that after its formation, and in his opinion to a great extent as a result of that, there had been no serious and general strikes in the trade. They were now frequently able to talk over grievances with the men, and, by reason of their combination, to settle differences in an amicable way. That was very much better than the protracted strikes which they had had in the past, and which brought nothing but misery and ruin to all concerned. After commenting upon the change in the attitude of the architects towards builders, he

concluded by advising them to be always ready by means of thorough organisation, so that if the necessity came they could meet either the men or the architects.

Mr. Colls, of London, proposed "The Town and Trade of Bradford."

Mr. Wm. Moulson, alderman, responded. He said he thought there was not another town in England which had seen so great a transformation as Bradford had in the course of the last twenty years. He remembered when there was a foundry with all its smoke right in the midst of the town. To the National Association was owing the increased respect with which builders in Bradford and elsewhere were treated by the general public and also by architects. They did not, he said, want to press the workmen; they should be pleased if trade were to become so good as to warrant the employers in granting an advance of wages, and at this time he must say there was every prospect of a better building trade. It had been bad enough for the last six or seven years, as they could all bear testimony to; but matters were looking brighter in Bradford for both employers and employed. In conclusion, he urged the necessity for the union which would be brought about by the local societies joining the National Association.

### SOCIETY OF ENGINEERS.

THE first ordinary meeting for the present year of the members of the Society of Engineers was held on Monday last, at the Town Hall, Westminster.

The statement of accounts for 1883 was read, after which the President for the past year, Mr. Jabez Church, M.Inst. C.E., F.G.S., &c., presented the premiums of books awarded for papers read during that year. These were to Mr. George Bower, for his paper on "The Bower-Barff Process of Preserving and Ornamenting Iron and Steel Surfaces"; to Mr. Chris. Anderson, for his paper on "The Feasibility and Construction of Deep-sea Lighthouses"; and to Mr. Hamilton W. Pendred, for his paper on "Designs, Specifications, and Inspection of Ironwork."

Mr. Church announced that Lady Siemens had kindly presented to the Society seventy volumes on engineering subjects from the library of her late husband, Sir William Siemens, in remembrance of his long connection with the Society of Engineers. Mr. Arthur Rigg, the new President for 1884, then delivered his inaugural address.

After referring to the work of the past session, and stating that the short educational courses of lectures commenced during the last President's term of office showed the interest taken by the Society in the education of engineers, the speaker referred to the extended cosmopolitan characteristics of engineering at the present time, showing that it now embraced subjects very widely separated, and then went on to trace the progress of engineering education in England from the great movement in Lancashire in 1839, which resulted in the establishment at Chester (under the late Rev. Arthur Rigg) of what developed into the first engineering school in England. He also showed that the superior technical training of Continental schools had influenced the English system, and that now the City Guilds were as concerned to make trade secrets generally known as their predecessors were concerned to keep them in the knowledge of few.

### PEABODY MODEL DWELLINGS.

THE annual report of the Peabody trustees states that the net gain of the year, from rents and interest, has been 25,252*l.* 16*s.* 2*d.* The sum given and bequeathed by Mr. Peabody was, in 1862, 150,000*l.*; in 1866, 100,000*l.*; in 1868, 100,000*l.*; and in 1873, 150,000*l.*; making a total of 500,000*l.*; to which has been added money received for rent and interest, 329,863*l.* 15*s.* 8*d.*, making the total fund at the end of last year 829,863*l.* 15*s.* 8*d.* In addition to this the capital account has been increased by 390,000*l.* borrowed from the Public Works Loan Commissioners and others, of which sum there remains unpaid 361,333*l.* 6*s.* 8*d.*, thus bringing up the total capital to 1,191,197*l.* 2*s.* 4*d.* Since their last report the trustees have expended on land and buildings 119,382*l.* 18*s.* 5*d.*, making the total expenditure 1,089,883*l.* 12*s.* 6*d.* During the past year the trustees have opened thirty-three blocks of buildings at Whitecross Street, St. Luke's, containing 1,878 rooms, all of which are occupied. Eleven blocks, to contain 514 rooms, are in course of erection at Pear Tree Court, Clerkenwell—the last of the six sites bought of the Metropolitan Board of Works. The trustees will commence at an early date the erection of eight blocks of buildings in Little Coram Street to contain 420 rooms. They will also, during the present year, build three blocks at Great Peter Street, Westminster, and begin four blocks on a plot recently purchased adjoining their buildings at Islington. At the end of last year they had provided 9,693 rooms, exclusive of bath-rooms, laundries, and wash-houses. These rooms comprise 4,359 separate dwellings, occupied by 18,009 persons. The average weekly earn-



ings of the head of each family in residence at the close of the year was 1*l.* 3*s.* 8*d.* The average rent of each dwelling was 4*s.* 8½*d.*, and of each room 2*s.* 1½*d.*, the rent in all cases including the free use of water, laundries, sculleries, and bath-rooms.

### THE FALL OF A CHIMNEY.

**D**URING one of the late gales the chimney of the Elton Vale Bleachworks, Bury, fell and caused the death of three of the employés. The inquest was adjourned to allow a professional inspection of the works. During the gale a violent gust of wind came, struck the chimney, and caused it to rock. Immediately afterwards a second gust caught it, and broke off about fifteen yards of the top of the chimney. This portion fell on to the room where the deceased were, and wrecked the building. It is stated that about twelve years ago the chimney was raised about ten yards until it was thirty-five yards high, and twelve months since was straightened by a man named Williams, who took out a course of bricks on one side, and then strengthened the chimney by placing iron bands at intervals round the structure. Mr. James Maxwell, architect, of Bury and Manchester, after making his inspection, has reported that a contract had been entered into for a new chimney, and that the work was to have been commenced on the day of the accident. The base of the chimney was defective, not only in area, but in the construction and strength of the walls, the size of the base being utterly inadequate for the height of the superstructure. The adding to the top was the primary cause of the accident, but the fact that it had stood for twelve years proved that it had had greater stability than he could have expected. From his inspection of the *débris* he came to the conclusion that the walls had not been constructed in a workmanlike manner, but that in ordinary weather the chimney might have stood for some time.



### Pugin's Gateway at Oxford.

SIR,—I see in your paper of January 26, under the title of "Oxford, by a Correspondent," it is stated that it is proposed to remove the "present handsome archway" built by Pugin in 1844. I have seen the gateway myself several times, and have shown it to my friends who admire English Mediæval work, and they, with many others, look upon it as a splendid revival and beautifully in keeping with that noble college which Pugin so much admired.

If this gateway is touched it will be a lasting disgrace to those that are the cause of it. It also states that it is going to be re-erected in an unmeaning place—that is, a gateway that leads to nowhere—the principle of which Pugin so much abominated; and to think of removing any such work in 1884, especially the work of that great architect, will be a piece of the greatest vandalism that was ever known.

We cannot for a moment suppose that Messrs. Bodley & Garner, whose taste is evidently so similar to that of Pugin, are responsible for the proposed demolition.

Perhaps your correspondent can give us some information as to the reason, if there be any, for such wanton destruction; for whoever may be the cause, he must hold the memory of the respected Pugin but lightly.

I am, yours respectfully,  
EDWARD SUTTON.

Nottingham: January 31, 1884.

### Traffic Facilities in the City.

SIR,—The question of providing increased traffic facilities in the centre of the City of London is now under consideration by the Commissioners of Sewers, and a decision is to be made between the claims of the completion of the widening the neck of Fenchurch Street and making an opening from Thames Street to the Monument, and it is important that the public should clearly understand the merits of the case.

On January 17, 1878, Colonel Fraser, C.B., reported to the Corporation on "Vehicular Traffic," "the still existing necessity for increasing the width of portions of Great Tower Street, Lower Thames Street, and more particularly the western end of Fenchurch Street as far as Lime Street." The *Times* caps this seven days later with:—"Pavements are crowded to such an excess all through the busy period of the day that foot passengers are jostled, delayed, and worried in their attempts to move at a reasonable pace."

The commerce of Mincing Lane and Mark Lane has increased.

The foot traffic alone between the corn, wine, tea, sugar, tobacco, and general produce markets, and the banks and money markets, is much greater, and the obstruction proportionably worse.

The interchange between goods and cash is not in the least relieved by Eastcheap. The conduct of this commerce will not travel round the whole length of King William Street, nor will the road traffic with the East India Docks and the north bank of the Thames ascend and descend the Minories to Tower Hill.

The urgent necessity of opening the central thoroughfare on the north bank has been long admitted by the Corporation, and six times have they put patches upon the width, making the pressure upon the point named by Colonel Fraser worse. About 120 feet frontages, on one side only, require to be set back to render effective the bits of widening began some forty years ago at Aldgate Pump.

At the end of seven years since the representations quoted were made, and a memorial from these markets was presented to the Corporation; this crying need is threatened to be again indefinitely postponed for priority to a cart-stand for Billingsgate. Who is to receive the 326,000*l.* for 150 feet of back slums behind the Monument, and whose remaining property is to be enormously increased in value, does not at present appear, although three things are pretty plain.

It is not proposed that those who pocket and profit should pay anything.

If this—for which the amount is not yet definitely voted—takes precedence, it inevitably follows that no money will be found at present for Fenchurch Street.

If schemes involving powerful pecuniary interests are preferred to the most necessary improvement of a great thoroughfare, Mr. J. B. Firth, LL.B., M.P., has made no such serious reflection upon the Corporation as these would fix upon their proceedings.

I remain, sir, your obedient servant,  
39 Mincing Lane: R. M. HOLBORN.  
Feb. 4.

### The Warming of Fulham Infirmary.

SIR,—I read your notice in *The Architect* of the 26th ult. on the warming and ventilating of Fulham Infirmary. The notice being misleading, I write to deny the assertion that the best stove that could be found is supplied for the warming and ventilating the buildings referred to.

The Manchester stove was objected to because the down draught smoke-pipe was not concealed. The Galton stove has not more than one-half the warm air generating power that the Manchester stove has, but it was preferred.

It was notorious with the Galton grate at the Smoke Abatement Exhibition, 1881-82, that when fire was put into it it filled the corridor, where it was fitted up for inspection, with smoke to such an extent that its use was discontinued; and there it stood, a dummy, without any fire in it for about six weeks to my knowledge, and yet this stove or grate, in the report of the Smoke Abatement Exhibition, is spoken of as being the one that should have been tested in the testing room, and set up as a standard of excellence for all other grates to be measured by. Now, sir, are the stoves fitted up at the Fulham Infirmary of the same excellence as the grate shown at the International Smoke Abatement Exhibition? I believe they are. I feel sure that you will grant me the privilege of allowing this to appear in your next issue, and am, sir,

Yours faithfully,  
G. S. SHORLAND,  
Patentee of the Manchester Stove.  
Wilmington Terrace, Brook's Bar, Manchester.  
February 1, 1884.

P.S.—The smoke-pipe in the Manchester stove is now concealed or otherwise as desired.

### ART WORKMANSHIP.

**Stained Glass for Canada.**—We understand that Kingston Cathedral, Canada, containing upwards of one hundred lancet windows, is to be entirely filled with English stained glass during the present year. The designs of Messrs. Wailes & Strang, of Newcastle-on-Tyne, have received the approval of the authorities, and they have been commissioned to execute the whole of the work. The same firm have also in progress an "Acts of Mercy" window to commemorate the philanthropist, Thomas Moore, in his native place, Bolton, Cumberland; and they have just erected a handsome window and memorial brass, at Naples, to the late Charles Ernest Barff, son of the British chaplain, who lost his life by the earthquake at Ischia.

**Hothorpe Hall, Rugby,** the seat of Sir Humphrey de Trafford, Bart., has been supplied by Messrs. Jones & Willis, of Birmingham, with handsome entrance gates and railing of wrought iron. The work has been executed under the superintendence of the architect. Mr. J. Bowden, Manchester.



## WORKS IN PROGRESS.

**Messrs. Hawes & Co.**, of Bloomsbury Court, Holborn, have recently laid their tile pavements to the whole of the chancel, aisles, and lobby floors at St. George's Church, Tufnell Park, N.

**Messrs. Malkin, Edge & Co.**, of Burslem, are supplying the encaustic flooring and glazed tiles required for the new Plymouth Pier and toll-houses thereto.

**Messrs. Diespeker & Co.**, 40 Holborn Viaduct, E.C., have just completed, from their own designs, the mosaic floors in the corridors and hall of the Herkomer School of Arts, Bushey, where their work has met with general approval.

**Craven, Dunnill & Co., Limited**, of the Jackfield Encaustic, Mosaic, and Art Tile Works, near Ironbridge, Shropshire, have received orders for the tiling at the following works, which they are now carrying out:—Corporation new swimming baths, Blackburn; Conservative Club, Blackburn; George Holt, Esq., residence, Sudley; St. Mary's Church, Drogheda; Houses of Parliament, Cape Town.

**Messrs. J. & T. Birks**, of the Hartshill Brick and Tile Works, Stoke-upon-Trent, have supplied the new workhouse buildings erected for the Bath Board of Guardians—now approaching completion—with the whole of the roof tiles, ridges, and finials, braided roof tiles and blue ridges and finials, which have a nice effect as they appear on the roof. Architects, Messrs. Lynam & Rickman, Stoke-upon-Trent; builder, Mr. Gallimore, Newcastle-under-Lyme.

**Phillips' Patent "Lock Jaw" Roofing Tiles**, which the patentee claims to be wind, rain, and snow-proof and ornamental, a combination of qualities very desirable in the formation of roofs for public and other large buildings, were recently specified for, and are being used for the following, amongst other important works:—The new School of Art in Birmingham, the tile in this case being chosen in public competition with other roofing materials; the Rainhill Asylum, near Liverpool, situated in an extremely exposed spot; the recently-completed House of Mercy, built upon the highest point in Penarth, near Cardiff. In this instance, owing to the late heavy gales, the tiles have been subjected to the keenest test, inasmuch as Penarth is a town on a lofty headland jutting out into the Bristol Channel, and exposed to the winds from all parts of the compass, and in addition to this it may be stated that the large number of 12,000 tiles were used on the roof, and fixed on the principle of locking and interlocking without any means of securing them to the rafters in the shape of nailing or otherwise. Thus the tile makes a complete and effectual roof, which has been proved by the fact that notwithstanding the recent storms not one tile has been removed out of place.

**Messrs. Samuel Trickett & Sons**, Victoria Stone Wharf, Millwall, E., are supplying their celebrated red Corsehill stone for the new offices now being erected in Ingram Court, Fenchurch Street, E.C.

**Messrs. Stone Brothers**, of Bath, supplied the whole of the Bath stone, nearly 100,000 cubic feet, used in the erection of the Rothschild mansion, at Halton, near Aylesbury, which has just been completed by Messrs. William Cubitt & Co. Stoke ground was the stone chosen. The same stone is in consequence now being employed in the restoration of the neighbouring church of Marsworth.

**White's "Hygeian Rock" Building Composition** has been specified to be used in Exeter New Asylum, Preston Free Library, Swansea Workhouse, Bedwelty Union, Blanca Board-school, Penarth Public Baths, Congregational Schools, Caterham, a mansion at Criccieth, new Malting Stores at Faversham, and at a new Baptist chapel, Putney.

**The Ventilation** of the new Prince's Theatre, carried out by the *Æolus Waterspray Company*, Holborn, is effected as follows:—A heating-stove is attached to the inlet ventilator, which delivers a volume of fresh warm air through a grating set in the main wall of the building. This stream of air is subjected to the action of the spray, where it is purified; thence it is forced over the surface of the heating-stove, and a continuous current is distributed through the whole structure with rapidity and economy. The exhaust service for withdrawing the vitiated air is equally effective, and the whole arrangement has been carried out in a thoroughly efficient manner. Air is delivered with delightful freshness, and, although it has passed through the spray and over the heating-stove, there are no symptoms of excessive moisture or of harsh dryness, the action of the one apparently neutralising the other.

**Mr. E. Adams**, 7 Great Dover Street, Boro', S.E., has just completed a large contract for his patent fanlight openers and louver apparatus at the new wing of St. Mary's Hospital, Paddington, for which Mr. Steven Salter was the architect. The sashes can be opened one above the other, with ease, perfect silence, and safety, this being so different to the cumbrous and noisy arrangement they had previously. The architect has in this case so arranged the fanlight and frames that no direct draught can be felt by the patients, this requiring special modification of Mr. Adams's patent apparatus.

**Messrs. Larmuth & Sidebotham**, of Salford, have supplied, from the designs of the architect, Mr. Wm. Owen, A.R.I.B.A., the whole of the fittings for the new School of Art at Warrington; these embrace many new features of great utility, and render the general equipment of the building very perfect. The same firm have just completed an extensive contract for furniture, including wooden bedsteads, wardrobes, bookcases, tables, and miscellaneous fittings for the annexe to the County Lunatic Asylum at Prestwich, erected from the designs of Mr. Hy. Littler, for the accommodation of about 1,200 patients.

**The American Elevator Company**, 38 Old Jewry, E.C., have received several important orders lately for first-class passenger lifts. Among them, one for the Turner Memorial Home, at Liverpool; one for the Criterion, Piccadilly; and one for the Hotel Schweizerhof, at Lucerne.

**The Hopton-Wood Stone Company, Limited**, of Wirksworth, Derbyshire, have just completed the balustrade at the new Municipal Buildings, Leeds; and the same firm are about completing an extensive contract for staircase at the Victoria Hotel, Manchester.

**Messrs. Le Grand & Sutcliffe**, 110 Bunhill Row, E.C., are engaged upon some important artesian wells, one at Messrs. R. White & Son's Mineral Waterworks, Walworth, the depth of which will probably be about 200 feet. A second boring is in progress in the new red sandstone formation at the Lichfield Brewery, near Burton-on-Trent.

**Birmingham**.—An extensive and handsome range of buildings has just been completed in Albion Street, Newhall Hill, for Messrs. Bishton & Fletcher, the eminent diamond workers, goldsmiths, and manufacturing jewellers. The façade is Italian, executed in red bricks, with greensill stone strings, sills, and main cornice. The internal arrangements of the various floors have been carefully planned to meet the peculiar requirements of the various branches of the firm's business. The heating of the premises is effected by the hot-water system of Mr. R. Renton Gibbs, of Liverpool. The whole of the works have been carried out by Mr. Thomas Hughes, builder, of Hockley, under the supervision of the architect, Mr. W. Tadman Foulkes, of 100 Colmore Row, Birmingham.

## ARCHÆOLOGY.

**Roman Chester**.—The antiquarians of Manchester, Liverpool, and Chester are co-operating in a search which is now being made in what is called the Dean's Field, Chester, for Roman and other remains. An excavation was first made some 10 or 12 feet in depth, close against the city wall. Two or three feet below the surface the wall was found to rest on made ground, and no trace of a Roman character was there discovered. A trench was then commenced in a diagonal direction from the wall towards the cathedral, which is some 200 yards distant. The men had only carried the trench some three or four yards from the wall when they came upon the foundation-stones of an ancient building. The angle of the building was discovered. The stones exposed are sandstone, rough hewn, apparently with axes, and as one of the walls runs east and west it is conjectured to have been an ecclesiastical structure of the Norman period. The cathedral was formerly the Abbey of St. Werburgh, and the dean's residence, hard by, is built on the site of another religious house. The ground excavated is within the cathedral precincts, and further discoveries are confidently anticipated. The belief has long been current in Chester that portions of the present city wall date back to the time of the Roman occupation, when a wall was constructed about the city by the men of the 20th (or Victrix) Legion. There have been no less than five Centurian stones discovered in various parts of Chester, recording that so many paces of the wall were built by the men under such-and-such a Centurion on a direction shown by a sort of index arrow, but none of these stones have been found in or about the city wall, and thus doubts have arisen whether any portion of the present city wall is in reality Roman work.

## LEGAL.

Queen's Bench Division.—Feb. 1.

(Before Mr. JUSTICE LOPES.)

MARQUIS OF SALISBURY AND ANOTHER v. HURTER AND ANOTHER.

LIGHT AND AIR CASE.

The Marquis of Salisbury, as the proprietor, and F. Weiss, as the lessee, of the house No. 2 Durham Street, Strand, sought to obtain an injunction against the defendants, proprietors of the Adelphi or Tivoli Restaurant, to compel them to remove an obstruction to light and air, and abate a nuisance arising from works connected with electric lighting at the defendants' premises. The defendants did not admit that the works were an obstruction to light and air, or a nuisance.



Mr. Petheram, Q.C., and Mr. Farwell appeared as counsel for the plaintiffs, while Mr. Reid, Q.C., and Mr. Grosvenor Woods were for the defendants.

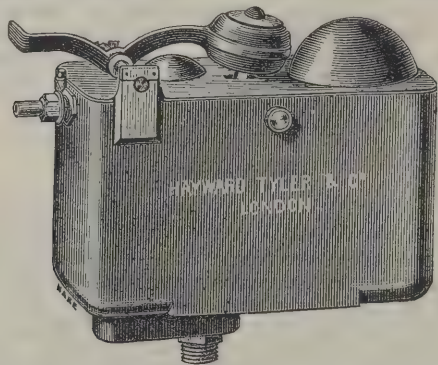
Mr. Petheram said that the works in question consisted of an engine and boiler with a tall shaft or flue, and that, besides the obstruction to light and air arising from the shaft, the operations were attended with great vibration, noise, and offensive smells, all of which interfered seriously with the comfort of the tenants of the house, and also, in some cases, with their business, while at the same time deteriorating the premises in value. The works were in a narrow yard, and the shaft was within two or three feet of some of the windows, the tenants complaining of the heat from it as part of the nuisance.

Evidence was given in support of the plaintiffs' case, and Mr. Reid cross-examined the witnesses, but eventually admitted that he could not maintain his defence.

Mr. Justice Lopes said there could be no doubt that the case for the plaintiffs was a very strong one, and that it was a very great interference indeed with any man's rights to erect such a shaft as that in dispute. The result was that his lordship gave judgment for the plaintiff, with costs, granting the injunction prayed for.

### NOTES ON NOVELTIES.

We illustrate an improved form of water-waste preventer or flushing cistern, lately patented by Mr. E. Howard, and introduced by Messrs. Hayward, Tyler & Co., of 84 Whitecross Street, London, E.C. Howard's patent cistern is a single box cistern, and therefore of moderate size and weight, but is free from the disadvantages attending almost all other single box cisterns, inasmuch as there is no interference with the action of the ball valve lever, and yet the water is perfectly cut off from entering the cistern before it begins to escape. This is effected by the patent admission



valve, which has a self-closing cut-off between the supply and the ball valve. When the cistern is at rest this valve is held open by an arm of the lever, so that the cistern is filled by the ball-valve, but as soon as the lever begins to be raised, the cut-off closes, and the water is shut off from the ball valve. The further motion of the lever in the case of a syphon cistern starts the action of the syphon, and in an ordinary double-valve cistern opens the outlet valve. These water-waste preventers have been specially approved by the authorities of the New River Company as conforming with their recent regulations. They are suited for all classes of closets, lavatories, &c., and every cistern is tested thoroughly before leaving the works.

### CHURCH BUILDING AND RESTORATION.

**Wortley.**—The new Wortley Wesleyan church was reopened last week, after the erection of organ built by Mr. Calvert, and new choir gallery, &c., by Messrs. J. Tomlinson & Sons, at a total cost of about 500*l.*, from designs by Mr. James Wilson, architect, East Parade, Leeds.

**Munster Square.**—The new north aisle of St. Mary Magdalene, Munster Square, has been opened. It is erected in memory of the founder, the late Rev. E. Stuart, its first incumbent, who in 1849–52 erected the nave, chancel, and south aisle from the plans of the late R. C. Carpenter. The plans for the aisle have been carried out with a crypt under its whole length, used as work and caretakers' rooms and for a mortuary, under the direction of Mr. R. Herbert Carpenter and Mr. B. Ingelow.

**At the Meeting of the London School Board** last week an estimate of expenditure for repairs and maintenance of schools for the year ending March 1885 was submitted, showing that the sum required would be 950,804*l.* This sum included—Maintenance of schools provided by the Board, 495,741*l.* 6*s.*, against 452,576*l.* 5*s.* last year, showing an increase of 43,165*l.* 1*s.*; school buildings, alterations, &c., not chargeable to capital account, 27,500*l.*, against 20,000*l.*, an increase of 7,500*l.* Authorisation was also given to the Committee to obtain plans for the extension of the Board offices, at a cost not to exceed 15,000*l.* for the fabric.

### GENERAL.

**Mr. J. P. Seddon** will deliver an address on "The Ventilation of Theatres" at the Parkes' Museum of Hygiene, on Tuesday, the 12th inst.

**Mr. Penrose**, architect to St. Paul's Cathedral, has made an inspection of Riddings parish church, in connection with the proposed building of a chancel and general repairs to the building.

**At a Meeting** of the Scottish Society of Water-Colour Painters, in Glasgow, the following were elected associates:—Mr. James Paterson, Mr. David Farquharson, A.R.S.A., Mr. Thomas Scott, Mr. C. J. Lauder, Mr. A. Black, and Mr. W. B. Hole, A.R.S.A.

**There is now on View**, at Mr. McLean's Gallery, 7 Haymarket, Mr. Pownoll Williams's sketches and drawings on the Riviera and the Lake of Como.

**A Conversazione** was held in the Fine Art Galleries, Sauchiehall Street, Glasgow, on Monday evening on occasion of the opening of the twenty-third annual exhibition of modern art promoted by the institute.

**The Three English Artists** who have been invited to contribute to the forthcoming Exposition Internationale at the Arts Décoratifs in Paris are Mr. Orchardson, R.A., Mr. E. J. Gregory, A.R.A., and Mr. R. W. Macbeth, A.R.A. Mr. Burne Jones was originally included in the invitation, but was unable to accept it this season. Mr. Orchardson will be represented by *A Social Eddy*, and by *Napoleon on the "Bellerophon."*

**The Free Schools** for instruction in water-colour art, which have been organised by the Royal Institute of Painters in Water-Colours, were opened on Monday in the studios attached to the Working Men's College in Great Ormond Street. There are at present about thirty students.

**It is reported** that the Duke of Wellington's statue at Hyde Park Corner is to be removed to a site overlooking the North Camp at Aldershot. The road by which the statue will be conveyed will be somewhat circuitous in order to avoid weak bridges, but the removal has been reported to be practicable. It is understood that another statue of the Duke will be erected on the site of the old one.

**In the description** which accompanied the illustration of Eastcheap Buildings in our issue of last Saturday, the passenger-lift was mentioned. The lift is one of Messrs. Waygood & Co.'s patent hydraulic balanced lifts, without balance-weights or chains, or any overhead gearing. As many as twelve persons have been raised by it into the fourth floor, a distance of 50 feet, in fifteen seconds.

**The Linerusta-Walton** has been awarded the gold medal and the highest class certificate at the Calcutta International Exhibition.

**Glasgow Architectural Association.**—The usual monthly meeting was held on Tuesday night, the President, Mr. P. M. Chalmers, in the chair, when a paper on "Electric Lighting" was read by Mr. J. R. C. Honeyman.

**Contracts for Building the South Cliff Hotel**, Scarborough, are to be obtained, and the work is to be carried out with as little delay as possible.

**Two Ventilators** on the District Railway, at Westminster, near the Houses of Parliament, have lately been removed and the roadway reinstated in its original condition.

**The Indian Government** has published reports of preliminary surveys of some new and important railway lines. The first of these, intended to connect Assam with the sea, will run from Chittagong through Cachar to Dibröogurh with a branch to Gowhaty. The total length—736 miles—is estimated to cost 6,46,73,000 rs. A line is also projected from Mogul Seria, near Benares, through Chota Nagpore and Orissa to Pooree, with a branch to Gya. The length will be about 652 miles, and the cost about 6,82,00,000 rs. The latter line will pass through extensive coal-fields, and will afford a short route for pilgrim traffic between the North-West and Pooree.

**It is intended** to erect a new school and class-rooms, with dormitory, adjoining the present Choir School House of All Saints, Clifton. Mr. E. Henry Edwards, of 5 Clare Street, Bristol, is the architect.

**The Manchester Literary Club** on Monday decided that, in accordance with the suggestion made at the last meeting, to issue a hand-list of the deceased and living artists of Lancashire and Cheshire, with a view to the compilation of a biographical dictionary, giving particulars of the deceased artists, and the names at least of the living men.

**The Students of the Institution of Civil Engineers** have just been notified of the resumption of the meetings for the reading and discussion of original communications by members of their class. The first of this series of meetings took place on Friday evening, when a paper was read by Mr. W. R. Moreland, on "Constructional Ironwork for Buildings," Mr. J. Wolfe Barry, Member of Council, presiding. The meetings will be continued on Fridays, the 5th and 22nd inst., under the respective presidencies of Mr. B. Baker and Mr. T. R. Crampton. The Council desire that students who have promised papers for subsequent meetings will forward them to the Institution without delay, so that no break may occur in the continuity of the meetings.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, FEBRUARY 9, 1884.

### TENDERS, ETC

\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

### EDITORIAL NOTICES.

The authors of signed articles and papers read in public must necessarily be held responsible for their contents.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

### ADVERTISEMENT SCALE.

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### COMPETITIONS OPEN.

ABERDEEN.—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10s. 6d. to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

BLOEMFONTEIN.—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

KNIGHTON.—Feb. 21.—Plans are required for a Stone-built Workhouse for 120 Inmates. Mr. E. H. Deacon, Clerk to the Guardians, Knighton, Radnorshire.

LEICESTER.—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

LONDON.—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

NEWCASTLE-ON-TYNE.—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

WIDNES.—Mar. 20.—Designs are invited for Public Offices and Town Hall. Mr. J. T. Allen, Public Offices, Widnes.

### CONTRACTS OPEN.

BACUP.—Feb. 14.—For Building Chapel and School at Troughgate, Britannia. Messrs. Maxwell, Tuke & Hurst, Architects, 175 Lord Street, Southport.

BARNESLEY.—Feb. 16.—For Building House and Shop. Messrs. Dixon & Moxon, Architects, 5 Eastgate, Barnesley.

BIRKENHEAD.—Feb. 15.—For Supply and Erection of Ironwork in the Retort-house at the Gasworks, Thomas Street. Mr. T. O. Paterson, Engineer, Gasworks, Birkenhead.

BANGOR.—Feb. 11.—For Building Houses, Craig-y-Don Estate. Mr. Richard Davies, Architect, Bangor.

BROCKERMET.—Feb. 11.—For Building Dwelling-house and Stables. Messrs. T. L. Banks & Townsend, Whitehaven.

BOURNEMOUTH.—March 1.—For Building Dwelling-house, West Hill Road. Mr. Herbert W. Dibden, Solicitor, Wimborne.

BRADFORD.—Feb. 22.—For Building School Chapel, Four Lanes End. Mr. W. Rycroft, Architect, 85 Chapel Lane, Bradford.

BRIGHTON.—For Building Wesleyan Chapel, Preston Road. Messrs. C. O. Ellison & Son, Architects, 62 Dale Street, Liverpool.

BRUMBY.—Feb. 20.—For Building Cemetery Chapel, Lodge, Walls, and Entrance-gates. Messrs. Bellamy & Hardy, Architects, Broadgate, Lincoln.

CHELTHAM.—Feb. 18.—For Building Boarding-house, Bayshill. Mr. J. Middleton, Architect, 1 Bedford Buildings, Cheltenham.

DENTON HOLME.—Feb. 12.—For Building Block of Cottages, Cow Byre, and Slaughter-house. Mr. George D. Oliver, Architect, Carlisle.

DUBLIN.—Feb. 13.—For Alterations and Additions to House and Premises, 106 Capel Street. Mr. J. Freeman, City Architect, Town Hall, Dublin.

DUNFERMLINE.—Feb. 14.—For Construction of Galleries, Carnegie Baths. Messrs. Campbell, Douglas & Sellars, Architects, 268 St. Vincent Street, Glasgow.

EBREW VALE.—Feb. 16.—For Erection of Hotel and Stable Buildings. Mr. E. A. Johnson, Architect, Abergavenny.

ECCLESFIELD.—Feb. 9.—For Building Board School at Burncross. Messrs. Wilson & Masters, Architects, Hartshead Chambers, Sheffield.

FINTRAY.—Feb. 16.—For Building Dwelling-house at Posnett. Mr. Warrack, Newmill, Fintrey.

GATESHEAD.—Feb. 9.—For Building Church of the Venerable Bede. Messrs. Oliver & Leeson, Architects, Bank Chambers, Mosley Street, Newcastle-on-Tyne.

GLANADDA.—Feb. 12.—For Building Houses and Shops. Mr. Richard Davies, Architect, Bangor.

## MANUFACTURERS AND IMPORTERS OF MARBLE AND WOOD CHIMNEY PIECES.

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**GRAVESEND.**—Feb. 11.—For Building Dwelling-house and Making Additions to Public Hall. Mr. T. Smith, 31 New Road, Gravesend.

**HALIFAX.**—Feb. 14.—For Additions to Workshop. Messrs. Petty & Ives, Architects, Waterhouse Street, Halifax.

**HENDON.**—Feb. 15.—For Construction of Sewers. Mr. John Pollard, C.E., Hendon.

**HUDDERSFIELD.**—Feb. 14.—For Building Store and Dwelling-house. Messrs. Abbey & Hanson, Surveyors, 20 Ramsden Street, Huddersfield.

**IRBY.**—Feb. 15.—For Building Wesleyan Chapel. Mr. W. A. Gelder, Architect, 7 Savile Street, Hull.

**KENDAL.**—Feb. 13.—For Building Two Dwelling-houses. Mr. John Stalker, Architect, 4 Aynam Place, Kendal.

**KILYBEBILL.**—Feb. 12.—For Building Schoolhouse for Infants and Making Alterations and Additions to present Schools. Mr. W. Samuel, Tanyraldt House, Pontardawe.

**LEEDS.**—Feb. 12.—For Building Additional Premises to Printing Works. Mr. Edwin Walsh, Architect, 40 Wade Lane, Leeds.

**LONDON.**—Feb. 14.—For Additions. The Horological Institute, Northampton Square, Clerkenwell.

**LONG EATON.**—Feb. 18.—For Building Ten Dwelling-houses and Shops, &c., Bridge Street; Nine Houses and Shop, King Street; Office, Princess Street; Stabling, Carriage-house, &c., Elm Avenue; and Out-office and Shop, High Street. Mr. J. Sheldon, Architect, Market Place, Long Eaton.

**MIDLAND RAILWAY.**—Feb. 14.—For Building Stables for Twenty Horses, Derby. Drawings, &c., at the Engineer's Office, Midland Railway, Derby.

**MIDLAND RAILWAY.**—Feb. 14.—For Erection of Station Buildings, &c., Shipley. Plans, &c., at the Architect's Office, Northern Division, Engineer's Department, Derby.

**MIDFORD.**—March 4.—For Construction of Bridges at Freshford and Midford. Plans, &c., at the Railway Station, Reading.

**NATLAND.**—Feb. 11.—For Building Home. Mr. D. Brade, Architect, 5 Bridge Street, Kendal.

**NEW WORTLEY.**—Feb. 9.—For Building Four Houses. Mr. C. F. Wilkinson, Architect, 8 Infirmary Street, Leeds.

**NOTTINGHAM.**—Feb. 18.—For Additions to County Court. The Secretary, H. M. Office of Works, 12 Whitehall Place, S.W.

**OLDHAM.**—Feb. 13.—For Extension of Mill. Messrs. Wild & Collins, Architects, 15 Clegg Street, Oldham.

**PETERBOROUGH.**—Feb. 12.—For Building Cathedral Grammar School and Master's House. Mr. Reginald Naylor, Architect, 16 Tennant Street, Derby.

**PLYMOUTH.**—Feb. 12.—For Alterations to Co-operative Store. Mr. H. J. Snell, Architect, 8 Courtenay Street, Plymouth.

**PONTYGWAITH.**—Feb. 14.—For Building Thirty Cottages. Mr. Stephen Williams, Pontygwaith, Porth.

**RIO DE JANEIRO.**—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

**RIVINGTON.**—For Building Vicarage. Mr. William Dawes, Architect, 2 Cooper Street, Manchester.

**ROCKINGHAM.**—Feb. 11.—For Building Dwelling-house, Offices, Boundary Walls, &c. Mr. Walter J. Sykes, Architect, Hoyland, near Barnsley.

**SAWLEY.**—Feb. 18.—For Building Six Dwelling-houses and Shop, with Outbuildings, Fence Walls, &c. Mr. John Sheldon, Architect, Market Place, Long Eaton.

**SHEFFIELD.**—Feb. 11.—For Building Five Shops. Messrs. Flockton & Gibbs, Architects, 15 St. James's Row, Sheffield.

**SILSDEN.**—Feb. 9.—For Building House and Shop. Mr. J. B. Bailey, Architect, North Street, Keighley.

**SOUTH BANK.**—Feb. 25.—For Enlargement of Police-station. Mr. Walker Stead, C.E., Court House, Northallerton.

**SOUTHEND.**—Feb. 19.—For Construction of Pier, Toll-house, &c. Mr. Cayton, Surveyor, Southend.

**STOCKPORT.**—Feb. 9.—For Taking Down and Re-erecting Iron Girder Bridge. The Borough Surveyor, St. Peter's Gate, Stockport.

**STOKESLEY.**—Feb. 25.—For Rebuilding Skutterskelf Bridge. Mr. Walker Stead, C.E., Court House, Northallerton.

**SUDBURY.**—Feb. 21.—For Alterations and Additions to The Ryes. Mr. E. F. Bisshopp, Architect, 32 Museum Street, Ipswich.

**WALLASEY.**—Feb. 14.—For Enlargement of New Brighton Pier. Mr. A. Dowson, C.E., 3 Great Queen Street, Westminster.

**WILSDEN.**—Feb. 16.—For Alterations and Additions to Chapel. Mr. M. Whiteley, Architect, 13 Charles Street, Bingley.

**WHITBY.**—Feb. 25.—For Building St. Hilda's Church. Mr. R. J. Johnson, Architect, 3 Arcade, Newcastle-on-Tyne.

**YEovil.**—Feb. 11.—For Construction of Brick Gasholder Tank. Mr. E. Howell, Gasworks, Yeovil.

## TENDERS.

### BUCKHURST HILL.

For Enlargement of Infant School, Albert Road North, Buckhurst Hill, for the Chigwell School Board. Mr. EDWARD EGAN, A.R.I.B.A., Architect. Quantities by the Architect.

Wells, Woodford	£870	0	0
Norton & Sons, Stratford	845	0	0
Egan, Buckhurst Hill	840	0	0
Duly, Loughton	818	0	0
Knight, Woodford	749	0	0
Robson, Woodford	735	0	0
Buckall, Ilford	720	0	0
Carker, Peckham	700	0	0

### CLACTON-ON-SEA.

For Building Ten Houses, Clacton-on-Sea. Mr. T. W. GARROOD, Architect, Forest Hill.

Lee	£3,800	0	0
Wood	3,640	0	0
Archer	3,362	0	0
Coe	3,250	0	0
Johnson	2,976	0	0
Hall	2,950	0	0

### CRICKLEWOOD.

For Making-up Claremont Road, Cricklewood, for Hendon Local Board. Mr. J. POLLARD, Surveyor.

Bigger	£1,276	0	0
Botterill	1,055	0	0
Felton	1,047	0	0
Martin	980	0	0
Nowell & Robson	977	0	0
Neave & Son	963	0	0
Bell	945	0	0
Mowlem	942	0	0
Adams	895	0	0
Hoare & Son	828	0	0
CATLEY (accepted)	766	0	0

### DUDLEY.

For Building Schools to Union Workhouse, Shaver's End, Dudley. Mr. J. B. MARSH, Architect. Quantities by the Architect.

Bennett, Birmingham	£7,947	0	0
Robinson, Birmingham	7,666	0	0
Holland & Son, Dudley	7,620	0	0
Cockin & Son, Old Hill, Dudley	7,588	13	0
Webb & Round, Dudley	7,497	0	0
Rowbotham, Birmingham	7,230	0	0
Peacock, Gornal	7,100	0	0
Harvey, Netherton, Dudley	7,020	0	0
Garlick, Birmingham	6,999	0	0
Nelson, Dudley	6,949	0	0
Jones & Son, Sedgely	6,890	0	0
Willets, Old Hill, Dudley	6,889	11	0
Horton, Brierley Hill	6,746	0	0
GUEST, Brettell Lane (accepted)	6,620	15	0

### EASTBOURNE.

For Construction of High-level and Storm-water Sewer, Eastbourne. Mr. CHARLES TOMES, Borough Surveyor.

	Brick.	Concrete.
Brydges, Westminster	£24,980	0 0
Bottoms Bros., Battersea	20,000	0 0
Hill Bros., High Wycombe	19,387	9 4
Marshall, Brighton	18,705	7 0
Cowdry & Son, Gloucester	18,550	0 0
McKenzie & Co., London	16,986	0 0
John & J. W. Neve, Stratford	15,500	0 0
Beadle Bros.	14,500	0 0
Botterill, London	13,898	0 0
Ford & Co., London	13,890	0 0
Woodhams & Fry, Greenwich	13,194	0 0
Hurst, Eastbourne	12,600	0 0
HAYWARD, Eastbourne	11,055	0 0
Borough Surveyor's Estimate	£12,000.	

\* Accepted for brick.

An inquiry will be held on the 21st inst. by Mr. J. T. Harrison.

For Erection of Proposed Town Hall, Eastbourne. Mr. W. T. FOULKES, Architect, 100 Colmore Row, Birmingham.

Quantities by Mr. W. A. Phipson.		
Hawes, Norwich	£38,000	0 0
Morris, East Grinstead	36,500	0 0
Perry & Co., Bow, E.	35,767	0 0
Peters, Horsham	35,591	0 0
Longley, Crawley	34,500	0 0
Avard, Maidstone	34,500	0 0
Martin Wells & Co., Aldershot	34,500	0 0
Bissett & Son, Aldershot	34,050	0 0
Wren, Eastbourne	33,515	0 0
Smith & Sons, South Norwood	33,367	0 0
Everett & Son, Colchester	32,450	0 0
Fell, Colchester	31,684	0 0
Bradney & Co., Wolverhampton	31,990	0 0
Peerless, Eastbourne	30,125	0 0
Hudson, Kearley & Co., Brighton	30,000	0 0
Foster & Dicksee, Rugby	29,999	0 0
Greenwood, Arthur Street, W.C.	29,915	0 0
Bull & Co., Southampton	29,800	0 0
Charwood Bros., East Grinstead	29,540	0 0
DONE & SONS, Eastbourne (accepted)	28,745	0 0

### GLASLLYN.

For Building Stabling and Studio at Glasllyn, near Rhayader, for Mr. H. W. B. Davis, R.A. Mr. S. W. WILLIAMS, Architect, Rhayader. Quantities by the Architect.

Evans, Rhayader	£1,600	0	0
Dove, Rhayader	1,360	0	0
Davies, Hereford	1,160	0	0
Welsh, Hereford	1,150	0	0
Davies, Newtown	1,122	0	0
Williams, Knighton	1,081	6	0
BOWEN & Co., Hereford (accepted)	985	0	0

### GRANGETOWN.

For the Erection and Completion of St. Patrick's Church, Grangetown, Yorkshire, for the Very Rev. Canon Holland. Mr. MARTIN CARR, Architect, Middlesbrough.

Craggs & Benson, Stockton-on-Tees (accepted).

### HARTSHEAD.

For the Erection of Conveniences, &c., at Hartshead, *vid* Normanton, for Sir George Armytage, Bart. Mr. R. F. ROGERSON, Architect, Brighouse.

Masons.		
FEARNLEY, Brighouse (accepted)	£19	13 10
Wood, Hartshead	19	7 6

Joiners.		
Dean, Hightown, Liversedge	5	0 0
JACKSON, Hartshead (accepted)	3	18 6

Plasterers.		
Gledhill & Barraclough, Brighouse	1	15 0

For Alterations to the Old Pack Horse Inn, Hartshead Moor, near Cleckheaton, for Sir George Armytage, Bart. Mr. R. F. ROGERSON, Architect, Brighouse.

Masons.		
Drake, Hartshead	£15	12 0
FEARNLEY, Brighouse (accepted)	12	14 0

Joiners.		
Jackson, Hartshead	8	4 0
HIRST, Clifton, near Brighouse (accepted)	6	13 9

### LONDON.

For Finishing and Completing Six Houses in Highlever Road, North Kensington, W. Mr. EDWARD MONSON, jun., A.R.I.B.A., Architect, Grosvenor House, The Vale, Acton, W.

RUTTER, Latimer Road (accepted) £1,200 0 0

For Road-making, Sewers, Manholes, Ventilators, &c., on an Estate at Hampstead, for the Directors of the National Liberal Land Company, Limited, 26 Charing Cross, London, S.W. Mr. GEORGE POOLEY, Surveyor.

Quantities by Mr. P. E. Murphy.		
Carter, Anerley	£1,469	0 0
Chafen, Rotherhithe	1,428	0 0
Felton, West Hampstead	1,247	0 0
Bloomfield, Tottenham	1,200	0 0
Nicholls, Wood Green	1,185	0 0

### MANSFIELD.

For Furnishing Infirmary at the Mansfield Union Workhouse. Mr. R. FRANK VALLANCE, Architect.

Atkinson & Co., London	£478	0 0
Greenwood, Mansfield	469	0 0
Hovey, Sheffield	459	13 8
Smith & Sons, Nottingham	449	19 10
Blake, Mansfield	449	10 0
CUDDY, Mansfield (accepted)	435	0 0

### MIDDLESBROUGH.

For the Erection of Class-rooms, Closets, and Staircase, for St. Mary's Schools, for the Bishop of Middlesbrough. Mr. MARTIN CARR, Architect.

Craggs & Benson, Stockton-on-Tees (accepted).

### NOTTINGHAM.

For Erection of Stone Urinal on the Meadows Cricket Ground, Nottingham. Mr. BROWN, Borough Engineer.

Green	£215	0 0
Hodson & Sons	215	0 0
Bell & Son	214	9 10
COOKE & JOHNSON (accepted)	202	0 0

For Sewering, Levelling, &c., Streets, Nottingham. Mr. BROWN, Borough Engineer.

Thumbs, Nottingham	£332	14 0
Smart, Nottingham	329	5 0
Hopkin, Nottingham	328	18 0
Knight, Loughboro'	321	2 0
Cordon, jun., Nottingham (accepted)	265	19 0

### OYSTERMOUTH.

For Building an Infants' School, Oystermouth, near Swansea. Mr. J. BUCKLEY WILSON, A.R.I.B.A., Architect.

Richards & Son	£710	9 0
Thomas, Watkins & Jenkins	580	0 0
Lloyd Brothers	525	0 0
Lewis	500	0 0
Thomas	495	0 0
Architect's estimate	500	0 0

### PONTYPRIDD.

For the Erection of Two Blocks of Cottages at Pwllgwynn, Pontypridd, for the Pontypridd House Property and Investment Co., Limited. Mr. R. PHILLIPS, Architect and Surveyor.

Green	£2,550	0 0
Williams	2,494	0 0
Julian	2,484	0 0
Morgan	2,420	0 0
ROWLANDS (accepted)	2,404	0 0

### SOUTHWICK.

For New Chapel, Lodge, and Entrance Gates, Southwick Cemetery, for Mr. H. T. GRADON, Architect, Durham. Mr. G. D. Irwin, Quantity Surveyor, Sunderland.

SCOTT & SON, Sunderland (accepted) £1,542



**RIBY.**

For Building Wesleyan Chapel, Riby, near Grimsby. Mr. JOHN THOMPSON, Architect.		
Burnett, Grimsby . . . . .	£485	0 0
Emerson, Grimsby . . . . .	463	9 6
Willows & Roebuck, Grimsby . . . . .	460	0 0
Adlard, Louth . . . . .	436	10 0
Hickling, Louth . . . . .	432	0 0
Snowden, Grimsby . . . . .	380	10 0
Leaning, Grimsby . . . . .	378	10 0
Fletcher, Cleethorpes . . . . .	370	5 3
Topham, Grimsby . . . . .	370	0 0
Thompson & Sons, Louth . . . . .	365	0 0
Thompson, Keebly . . . . .	365	0 0
Oglesby, Killingholme . . . . .	339	0 0
Hobson, Hogsthorpe . . . . .	330	0 0
JEWITT, Stallingborough (accepted) . . . . .	325	0 0

**STAINLAND.**

For Decorator's and Painter's Work to Wesleyan Chapel and Schools, Stainland, near Halifax. Mr. T. L. PATCHETT, Architect.		
TOWNSEND (accepted) . . . . .	£130	0 0

**SUTTON.**

For Alterations to Nos. 3 and 4 Mulgrave Road, Sutton (Surrey), for the Executors of Mr. J. R. Hall. Mr. HERBERT D. APPLETON, A.R.I.B.A., Architect, 157 Wool Exchange, E.C.		
Roberts . . . . .	£470	0 0
Humphris . . . . .	450	0 0
Evans . . . . .	398	0 0
Potter . . . . .	380	0 0
Parker . . . . .	380	0 0
Robinson . . . . .	335	0 0
Wootton . . . . .	298	0 0

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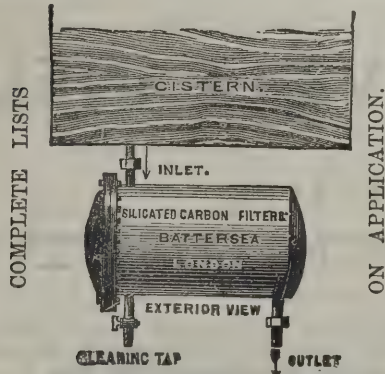
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For Rebuilding Tower to St. Joseph's Church, Stokesley (Yorks), for the Rev. L. McGonnell. Mr. MARTIN CARR, Architect, Middlesbrough.		
Craggs & Benson, Stockton-on-Tees (accepted).		

**STRATFORD-ON-AVON.**

For Alterations and Additions to House in Sheep Street, Stratford-on-Avon, used as Offices by the Borough Surveyor. Mr. H. T. DAVIS, A.M.I.C.E., Borough Surveyor.		
Callaway . . . . .	£243	10 0
Harris . . . . .	231	0 0
Roberts & Sons . . . . .	225	0 0
Kenard . . . . .	189	0 0
Quest . . . . .	185	0 0
Wilkinson . . . . .	178	10 0
WHATELEY (accepted) . . . . .	145	0 0
Borough Surveyor's Estimate . . . . .	198	0 0

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For New Blocks and Alterations to the Swansea Work-house. Messrs. W. D. BLESLEY & ASPINALL, Architects.		
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Billings, Swansea . . . . .	£29,125 5 9	£12,077 2 0
White, Swansea . . . . .	29,500 0 0	8,600 0 0
E. Morgan, Tredegar . . . . .	25,331 0 0	9,869 0 0
D. Morgan, Swansea . . . . .	24,989 0 0	9,211 0 0
Davies, Cardiff . . . . .	24,800 0 0	9,300 0 0
Riley, Fleetwood . . . . .	22,651 4 4	10,344 9 8
Lewis, Swansea . . . . .	22,530 12 8	7,682 4 7
THOMAS, WATKINS, & JENKINS (accepted) . . . . .	21,100 0 0	7,900 0 0

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For Alterations and Additions to Tregunter Park, near Talgarth Mr. J. B. FOWLER, Architect, Brecon. Quantities not supplied.		
Welsh, Hereford . . . . .	£4,050	0 0
Williams & Sons, Brecon . . . . .	3,800	0 0
Williams, Knighton . . . . .	3,494	9 2
Thomas, Watkins, & Jenkins, Swansea . . . . .	3,491	15 6
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For Proposed Alterations and Addition of Wing (72 feet long and three Storeys high) to Torcross Hotel, Torcross, near Kingsbridge. Messrs. OLDRIVE & KINGSTON, Land Agents, Totnes.		
Gibson, Exeter . . . . .	£900	0 0
Pearse, Modbury . . . . .	799	0 0
W. Browne, Harbertonford . . . . .	695	0 0
Patey & Stumbles, Salcombe . . . . .	635	0 0
J. J. Browne, Harbertonford . . . . .	581	12 6
Rundle, Kingsbridge . . . . .	547	0 0
Edgcombe & Harvey, Blackawton . . . . .	499	10 0
Farr, West Alvington . . . . .	450	0 0
Shepherd, Stokenham . . . . .	448	0 0
BROOKING & CLEMENTS, Stokenham (accepted) . . . . .	447	0 0

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Norton & Sons, Stratford . . . . .	£1,742	0 0
Hosking, Forest Gate . . . . .	1,726	0 0
Read, Walthamstow . . . . .	1,652	0 0
Parker, Peckham . . . . .	1,565	0 0
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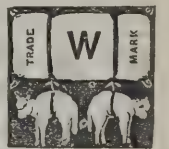
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# The Architect.

## BUILDING FOR IMMORTALITY.



NE of our favourite cathedrals is just now a sad example of the vanity of human ambition. "The best laid schemes," says BURNS, "of mice and men, gang aft agley;" they go oftentimes, that is to say, very much awry; and, amongst the most favourable varieties of this world's enterprise, it is to be feared that architecture for one has furnished its full share of illustrations for the maxim. Simultaneously with the intelligence that reaches the public respecting the ruinous state of things at Peterborough, we find some one

in a contemporary advocating with an appearance of earnestness the construction of the proposed new Admiralty and War Offices, in such a material—granite to wit—as shall endure for ever. The contrast between these two cases is suggestive of reflection in many ways. Possibly there may be only a shrewd northern stone merchant at the bottom of the one, while some exceptional misadventure of old time may explain the other; but it is not worth while to deny that the passion for immortality of building is a human impulse not yet extinct, which has produced in the past, and will produce in the future, many genuine successes and many conspicuous failures.

It is a long way from the Pyramid of CHEOPS to a block of London offices, as everyone will be willing to admit; but it would seem as if it were an equally long way to a great Mediæval church, a proposition which few of us have hitherto supposed to be the fact. There are some who do not forget, of course, what took place at another English cathedral some two-and-twenty years ago; but this only emphasises the lesson taught in both cases—for they are very much alike—to all those in the architectural world with whom a truly high standard of building is but a matter of theory, if even so much. The fact is that architecture of the highest order of construction is now almost, if not quite, unknown. Science, so to speak, has driven it out of the world—the science of administrative economy. The first axiom of this science is that material and labour must not be wasted; that excess of substance or of care is a discredit to the designer; that something like a mathematical balance in all things is essential to duty. We are so accustomed to square accounts in the ordinary affairs of life, that we cannot discern the difference between a correct balance-sheet in pounds, shillings, and pence, without a farthing to spare, and a statical balance of this and that structural strain, which waits only for the inevitable unforeseen to overturn its equilibrium, with nothing to save it. Without going too far in the direction of building with the hope of immortality, why might we not try to do a little more in the way of building for at least a liberal interpretation of the masculine idea of permanency?

Perhaps it is only monumental architecture that is worthy in any case of the highest order of construction; but even the term monumental has to be taken here with a qualification. So little work in any sense monumental do we undertake in England, that critics are obliged to encourage the ambition of architects by applying the term to such examples as a provincial town-hall, a suburban church, even a market for meat or an exchange for corn. But in truth all of these, except occasionally the church, are mere shelters that perish with the using. We except the church because the temple of divinity, in whatever form and for whatever faith, if a temple at all, has always offered itself as a fit subject for monumental dignity and for monumental immortality. The temples of antiquity have no doubt succumbed to the violence of religious fanaticism much more than to the legitimate influence of time; but whenever they have fallen through age, the noblest and the humblest alike, and those of the most refined cultus no more or less than those of the most barbarous, they may be said to have yielded only to the hand of heaven in spite of all that earthly ambition could do.

After the revelations that have been brought to light with regard to the building construction of Peterborough Cathedral—and the self-same discovery was made in another case, as we

have said, not long ago (at Chichester)—there are many of us who may begin to suspect the stability of the great edifices of the Middle Ages generally. The extreme lightness of their construction has long been remarked upon as a triumph of skill. The test known by the name of "the ratio of the points of support" is often quoted for our admiration. That is to say, whereas in St. Peter's at Rome the area of walling upon the plan is in the aggregate one-fourth of the space of ground covered by the roof, and in St. Paul's at London one-sixth, in the Mediæval cathedrals it is less than one-seventh, including the solid masses of western towers, whilst, excluding these, it is in some cases almost startling in the insignificance of its proportion, looking more like such a thing as timber or ironwork than stone masonry of any practicable kind. What shall we say, then, when we are told that an edifice of this class, in which one ought certainly never to expect to find anything but scrupulously uncompromised solidity as the first condition of a universal scheme of slender arcuation, has for the interior substance of its walls and piers a mere concrete of pebbles and the dust of what once was clay-mortar, depending for the very retention of the form of wall or pier upon a thin casing of surface stone, itself without bond and dislocated and wasted by time? "Lantern and piers alike," says the Dean of PETERBOROUGH, "were of the most wretched construction. The walls of the lantern, dating from the fourteenth century, were mainly composed of rubble and pit mortar" (Mr. PEARSON calls it "sandy earth"), "with a very thin facing of Barnack stone. . . . When the piers were reached, which had been crushed and peeled off by the too great pressure of the heavy Norman tower, . . . it was found that they were of no better masonry. . . . The core of these great Norman piers was nothing but dust." And all this had for foundation only "small stones laid on loose gravel; . . . although, if the builders had gone some 3 feet lower, they would have touched the solid rock!" What a satire upon building for eternity? If anywhere a grand monumental edifice is to be found, it ought to be such a one as this cathedral, and yet it is built of rubbish. But, what is a stranger fact, it has stood erect for centuries; a fact, again, which is almost less astonishing than another, namely, that on the very spot where a first cathedral had gone to pieces through such construction, the builders of a second had built not a whit more wisely. We may certainly congratulate ourselves upon being well assured that, whatever may be the faults of our modern restorers and reconstructors of churches, they cannot be charged with work quite so bad as this. But still, is their work immortal?

The question is not easily answered if we ask what kind of edifices ought in England to be built in monumental strength so as to last for ever. Churches would seem to have the first claim upon such dignity, no doubt; in other words, there is a large majority of the English people in whose minds, apart from all the many differences of religious creed and discipline, the establishment of a temple for Christian worship is an act of everlasting homage to the claims of virtue. Save a few small and unimportant sects, all denominations alike are found to cherish the sentiments which make a church a monument. And accordingly we may say without further phrase that the churches of England, taken in the aggregate, are clearly recognised as the monumental architecture of the land. At the same time we cannot allege that they are truly of this character so often as they might be. In a word, the genius of economical adjustment pushes its way to the front in almost every case. A few examples are conspicuous to the eye of the connoisseur here and there, in which not only has commonplace parsimony been repudiated, but the liberality of an exalted ideal has been accepted in its stead. But even in such rare instances it can scarcely be affirmed that liberality has reached the truly monumental standard of immortal building. Perhaps the whole principle of Mediæval lightness of construction, so much admired, is in its modern interpretation especially misleading. Massiveness, even exaggerated, may certainly be much more wisely advocated as an essential element in building for posterity; and if this is a massiveness almost exclusively identified with primitive times or primitive manners, perhaps we only need to suppose that the primitive intellect must have possessed a nobler idea of the act of "longing after immortality." The time has come when even bridges across great rivers and lighthouses in stormy seas are built of slender ironwork instead of mighty stone, when an Albert Memorial has its iron ribs as a Crystal Palace has its cage of wire; we talk complacently of "iron and



plaster, the materials of the future," iron that dissolves into rust and plaster that crumbles into powder; sufficient for the day is the work of the day, and to-morrow must provide for itself.

### GENUINE WORKS OF ART.

THE high esteem in which famous works of art are held is not an altogether unmixed tribute to their artistic merits. We prize a TITIAN or a TENIERS not only for the beauty of the colour in the one, or the homely force of the other, but because we have in the pictures the undoubted handiwork of an illustrious artist. Part of the value put upon such a work of art resembles the price paid for an autograph or a relic; or we may compare it with the value attaching to some unusual gem, of which the beauty and the rarity are both esteemed precious.

It is no secret that if two equally powerful pictures were brought to the hammer, one of which was undoubtedly the work of a master whose pictures are sought after, while the other could not be attributed to any known master, the anonymous picture would not, however great its merits, find a purchaser at a price approaching that of the other. And though this criterion may be objected to as a coarse one, the same result would be arrived at by other tests. The critics are in this respect more exacting than the general public. The crowd may perhaps admire a picture that is striking, or a statue that is noble, without caring to ask who made it; but the select few will inquire first if the work be authentic, and only in the second place if it be excellent.

Should the work of art be one of great antiquity, so that its authorship cannot be attributed to any individual, its authenticity may consist in its being an undoubted specimen of the age to which it is attributed; and under such circumstances almost, if not quite, as much value will attach to it on this ground as though it were possible to attribute it to some individual master. This sort of authenticity it is which was lately disputed in the case of part of the collection of antiquities from Cyprus made by General DI CESNOLA. The General, it may be recollected, spent many years in Cyprus, and there formed a splendid museum of works of ancient art, which the American Government purchased from him. We regret that, as stated in *The Architect*, a long and costly litigation has risen in consequence of its being alleged that the General had done or permitted some kind of restoration or alteration which had destroyed the genuineness of some of these objects. The result of the appeal to law was in General CESNOLA'S favour; but the occurrence suggests the subject as one to which attention may very well be directed.

The result of reflection will be to convince us that any kind of addition to or alteration of an authentic, and especially an ancient, work of art is *primâ facie* undesirable and dangerous, but that there are some circumstances under which it is unavoidable. It is idle to say that in no case should anything which possesses artistic value be touched at all—as idle as to maintain, on the other hand, that we are free to deal with the works of our forerunners in the arts exactly as we like, and to alter them just as we think best. It will also be felt that some classes of objects are from their nature or their use more unfit for the restorer's hand than others which cannot well be left untouched; and it will even be seen that the case is not quite the same in reference to works of sculpture, of painting, and of architecture. Taking works of sculpture first, the British Museum will afford an easy means of contrasting works that are wholly untouched with others that are not so. If we visit the Græco-Roman collection, consisting for the most part of replicas of very celebrated Greek statues copied for Roman patrons by clever Greek sculptors, we find hardly a specimen free from some additions, or, as the catalogue terms them, restorations. Here an arm, there a leg, very often a nose, has been supplied, no doubt for the most part by fairly clever sculptors. The result is, that the statues look much better to the eye of the ordinary observer than if they were without their restorations, and that as the learned have been used to them, they are tolerated, if not liked. The proposal to take away from these works every portion not ancient would be probably rejected as, if not barbarous, at any rate hypercritical by ninety-nine out of a hundred. We have only, however, to pass through an open doorway, and in the Elgin room we find ourselves in the presence of the finest sculptures of

antiquity. The ruined, battered fragments of statues from the pediment of the Parthenon, and the mutilated groups from the metopes and the frieze, have not been restored. Were such a proceeding even suggested, the outcry which would justly rise would be of the most clamorous and indignant kind, and this not only, perhaps not chiefly, because the works have never been touched, but because they are too precious to touch. We may, however, go further, and say that if any fresh collections of antique work of fairly moderate excellence were now acquired, and came to this country untouched, the public feeling of the present day would probably be decidedly against any attempt to supply missing ears, or hands, or feet, or broken noses or knees, in the manner in which such repairs were formerly done by the Italians who collected the statues already referred to.

Thus far, then, we seem to gather that there is more to be said against the restoration of ancient works of sculpture than in its favour, and that the finer the sculpture the more distasteful will any tampering with it be. The handling of a second-rate man may perhaps be matched by another on the same level, but the touch of a truly great master is too subtle to be approached by ordinary skill, and too precious for even a fragment of it to be disturbed.

Old pictures are admitted to be more liable to require, or at least to provoke or suggest, the operations of the restorer than any other works of art. Dirt accumulates and must be cleaned off. Accidents damage the surface, and to paint in a patch seems so easy. Colours fade or fly, and a little glaze deftly applied seems likely to restore the harmony of tinting which the original work possessed, and so forth. The picture-restorers' craft has existed for centuries, and the idea of touching up a picture somehow seems hardly to be so utterly repugnant to the mind of the connoisseur in the art of painting as might have been expected. Still there is no doubt a strong feeling against the practice, and this dislike is probably a growing one. The exhibition now open of works by Sir JOSHUA REYNOLDS may be taken as affording good examples of the accidents which the picture-restorer is tempted to repair, and many specimens of touched and some of untouched pictures. The carnations have faded from many a sweet face in this gallery once bright with the glow of health; and no doubt it would be in many cases quite possible to bring back to the picture a close approximation to the colours which it must have presented when first painted; and this has in some instances been attempted. Most admirers of REYNOLDS, however, would prefer to retain untouched what time has spared of the actual work of the great master of portraiture, and will look with suspicion upon such restorations as have been carried far, and even regard the pictures on which such work has been done as deprived of no small part of their authenticity.

The question of restoration in architecture is not one to be disposed of in a paragraph or two, unless we content ourselves with borrowing the oracular words of Sir ROGER DE COVERLEY that "there is a great deal to be said on both sides." We may, however, point out that a building, however noble, is not only a work of art, but a great fabric, exposed to all the destructive accidents and influences due to decay, weather, neglect, war, fire, and violence, and that it is, generally speaking, a structure with some purpose to serve or employed in some way for the objects of life. It is obvious that repair is needed by a building to an extent that no other work of art will require, and also that, with the exception of sculpture, there is nothing in it which takes the shape of the manuscript work of the artist. The ideas of the original architect were rendered in stone by the handiwork of artificers; and if the skill of the masons of our day be equal to that of their forefathers, and the intention of the architect be still clearly traceable, notwithstanding decay or damage, then a perfect restoration seems at once more easy and more defensible than in the case of any other work of art. It is from the neglect of these conditions, or the impossibility of securing them, that mischief has arisen. Either the original mouldings or treatment cannot now be made out, or have not been followed, or modern masons and those who direct them are not skilled enough to reproduce them, or perhaps decayed carving has had to be replaced by the work of modern carvers, and, of course, in these cases damage has been done. It would, however, be simply impossible to leave such a structure as Peterborough tower to stand till it fell, or to abandon Chichester to ruin because the steeple had fallen. Repair in such cases is unavoidable, and the object of every true architect charged with such repair is to make it as conservative as possible.



Probably the true wisdom in the case of works of sculpture, and possibly of painting, is to be content with simply taking care of them, to admit no restoration or even repair, so that if an antique statue be headless or without an arm we should leave it as it is found—to let it remain a fragment, thoroughly authentic if incomplete; if a picture be fading let it be protected from light when possible, but not touched up and brought back to its original brightness. These rules cannot possibly extend to architecture, whatever Mr. MORRIS may urge to the contrary; but they may serve to draw attention to the undesirableness of anything like obviously new work, unless it be in the shape of additions or substitution of new for what is hopelessly decayed or injured. Such a restoration as, for example, that of the chapter-house at Westminster, where the original architect's design has been recovered in every particular and once more placed before us in its perfect completeness, is a distinct rescue of a perishing work of art from absolute ruin, and has enriched Westminster by giving a new lease of life, so to speak, to a great monument. Such a work may be safely appealed to as a sufficient vindication of the practice of restoration as applied to architecture.

### MESSRS. GOUPIL'S GALLERY.

THROUGH the handsome galleries of Messrs. GOUPIL in New Bond Street pass from time to time pictures that have been conspicuous within Continental exhibitions, and without exaggeration may be called eventful when shown in London. Such a picture is just now on view, the *Psyché* of JULES LEFÈVRE, which both at the Salon and at the Exposition Nationale of 1883 added distinction to the artist's reputation.

The Puritanic misconceptions of art which until recently, and even yet, hamper the study of the nude, and frown upon the admission of the undraped figure to the walls of our public galleries here in England, play no such part in Paris. There, on the contrary, the pure freedom of art has in this matter degenerated into license, and the annual exhibitions, whether at the Salon or elsewhere, testify to an audacity of meretricious taste—to use no harder term—which has passed the bounds of decency and rebelled against the ordered dignity of true art. But M. LEFÈVRE stands apart from such lawless extravagance, and, while assuming to the full the right of the painter to represent the most beautiful thing in creation, the nude female form, he shows a fine reticence, and lifts his subject in the grasp of an elevated style. Yet we must allow that the *Psyché* is quite modern; it is, that is to say, neither Greek nor pseudo-Classic; it differs from INGRES as much as from PHEIDIAS. The forms are neither combined by selection into an ideal type, nor sought by elimination of the sensuous from a model of alluring contours. This *Psyché* of M. LEFÈVRE has the purity of undeveloped womanhood. She is a young girl; the long supple lines of her figure, the extremities a little large though delicate, the firm yet tender curves, all show a frame that will flower into large luxuriance, but is as yet in the exquisite beauty of the half-opened blossom. Herein the feeling is modern; we have the particular rather than the general, the individual rather than the ideal. The head, too, carries out the same treatment. The profile is sensitive, with features regular, but softly rather than sharply cut; the nostril is shallow, the upper lip a little long, the eyes set high in a brow not highly developed, and the simplicity of the type is aided by the long drift of reddish flaxen hair parted low on the forehead, caught together at the back of the throat, and hiding in its fall the line of the girl's back.

So much for the style in which M. LEFÈVRE has treated the *PSYCHE* of the classic myth as to form and type. We have to add that the same principle dictates the colouring. This artist has a reputation for flesh-painting; his technique is undeniable. Here he steers with consummate skill between the chill negation of INGRES and the palpitating realism of the modern sensationist, between the waxen prettiness of the sentimental school and the brutal coarseness of the advocates of the ugly. The pearliness and tenderness of the flesh-painting here remind one of PYGMALION's statue when the gods have granted the warm pulse of mortal woman, but as yet the living image stands on her sculptured pedestal. It is no wonder that the painter of *Psyché* serves as exemplar to young students; his brush-work shows the expert in method as his outline confesses to a master of drawing. That in colour this picture

is wholly satisfactory we are not prepared to admit, although the scheme is deliberately chosen to emphasise the character of the design. The girl is seated in profile upon the edge of a bare cliff tinted in brown greys; a pale lilac scarf, spread beneath her, falls over the rock; beneath stretch in green wavelets up to the horizon the waters of Acheron; the background of Stygian gloom, across which flit the pale ghosts of the dead, darkens above and around the figure of *PSYCHE*, as she waits for the ferryman *CHARON*, holding her precious casket with both hands above her knees. The effect is cameo-like in relief, and the broad and somewhat negative plan of colour, while it gives contrast, brings no charm in itself to distract the sense from the power of the design. Decorative, as opposed to actual and realistic, this picture is, but decorative as a marble frieze or a vase painting. As we have said, the *Psyché* is only in passage through London to its destination in Philadelphia, the owner being an American lady, who must be congratulated on her enterprise and taste; but a line engraving is promised on moderate scale.

The *Psyché* is not the only picture of mark at Messrs. GOUPIL'S. Three notable English canvases are for the moment on view—ROSSETTI'S *Day Dream*, MILLAIS'S early *Isabella*, and a composition in HERKOMER'S Tyrolean vein, of peasants descending a mountain path, shown at the Academy some years ago; all three pictures one is glad to see again. On another wall hangs the large, life scale, single figure, by JOZEF ISRAËLS, which was at the Amsterdam exhibition—an old fisherman standing in the waves, dragging for mussels. Very broad, bold work it is and full of vigorous life, but hardly so satisfactory as the painter's smaller subject pictures; his technical mode becomes, on the large scale, coarse without corresponding mastery. A small picture of incident, by E. DANTAN, is admirable for artistic management and quiet completeness of narrative skill, but the way in which the story of the boy's maimed hand, now in process of being bound up by a young surgeon, is told by aid of the basin of blood and other ghastly accessories, savours too much of the taste for horrible detail. A piquant head, by JACQUET; a fresh and delightful study of a girl's head and partly uncovered bust, by the Belgian C. HERMANS, are again among the attractions of the gallery. In landscape there are still some of the clever and artistic coast and sea studies—*en grisaille*, one might say, so studious of greys is the painter—by Mr. BLOGGS, the American pupil of M. GÉRÔME. One or two luminous bits by the Alsatian, M. ZUBER, are well worth looking at; a little crude in the impasto, as is the fashion with young France, but brilliant and keenly accented. A sylvan scene by COROT, of the best kind, and a number of capital bits by an old favourite who still enjoys the favour of the knowing, M. DIAZ, are also among the baits for happy collectors. MM. GOUPIL'S print room always abounds in good things of reproductive art. The version of Mr. WATTS'S portrait of *Cardinal Manning* is among the happiest specimens of the *photogravure* which, as in this case, translates the best qualities of a painter's work.

### THE INCIDENCE OF BUILDING RISKS.

[BY A CORRESPONDENT.]

(Continued from page 87.)

RISK (6) in Mr. RICKMAN'S schedule is "the use of materials from the estate." This sometimes is a removal of risk rather than an addition to it. The building owner agrees with the builder to supply him with (say) bricks at 25s. per 1,000 fit for use in the work. The risk as to the quality and price of bricks is removed from the builder, and the value of brickwork (so far as bricks are concerned) becomes a simple arithmetical calculation. Trouble (and trouble in building works means always some cost) does often occur in the use of materials from the estate—from local causes or agents' caprices; but usually a builder does not run much risk under this head.

Risk (7) should be divided into two parts—(A) the state of the adjoining premises as affected by the proposed works, and (B) the condition and value of the old materials which may have to be raised. As to the first portion (A), it may be said to be one of the debatable risks as to whether it should remain with the building owner or be transferred (for a consideration) to the builder. Every case should be governed by its special circumstances.



In all cases in town work where adjacent buildings have to be interfered with, especially where party walls have to be pulled down and rebuilt, there must be exceptional risk, and the architect and builder must settle between them who shall take the risk. The cost of reinstating the adjoining premises may be so indefinite, not at the discretion of the architect or builder of the new building, but depending on the requirements of the adjoining owner, and probably his architect, that the risk should remain with the building owner, the builder doing what he is ordered under the immediate direction and superintendence of the architect and his clerk of works. But there are many cases in which, by care and judicious management of the builder's foreman, the adjoining building may be protected from serious injury; and in such cases the builder can well afford to take the risk on receiving a fair equivalent for it, thereby earning a good profit for himself and benefiting the building owner by giving him the benefit of the builder's skill and experience in dealing with difficult works. But in all cases of doubtful risk, the element of fair play as between builder and building owner should predominate, the builder taking such risks as are intelligible, and carrying out the works to the hidden risks at a fair profit to himself, but at the least possible expense to the building owner. As to the division (B), "the condition and value of the old materials which may have to be used," there can be little doubt that, as a rule, the best course for the building owner is to sell all the old materials as they stand, and have them carted off the premises. Old materials in a new building are usually a nuisance, and cause more trouble than they are worth. Where, however, it is decided to use old materials, the builder must exercise his judgment as to what they are worth after all expenses have been incurred upon them, and it will be generally found that neither the building owner nor the builder benefit by their re-use.

Risk (8) is stated as "risk of irregularity of payments and the failure of the employer." This is purely a commercial risk. Before undertaking the contract the builder should satisfy himself as to the capability of the building owner to pay for the building; and if he has any reason to doubt this capability he had better decline the work than run the risk of irregular payments and ultimate failure, to protect himself against which he cannot introduce any equivalent.

Risk (9) is "penalty as to time of completion." Notice of a "penalty" or "liquidated damages" is usually found in a contract. It is very seldom enforced. So many circumstances are against its enforcement that it is of little use in contracts where fairness has prevailed; but it is necessary, perhaps, that these "penalty" clauses should remain in ordinary contracts, as they do afford some security against very unscrupulous men. Before undertaking a contract to execute a building in a given time, the builder should consider if the work can be done in the time named without extra expense to himself. If it can, the "penalty" may be disregarded; but hurried work is expensive work. Overtime is very expensive to the builder: more money paid and less work done per hour is the result. Working before or after daylight in new buildings causes increased expense to the builder. Crowding more men upon the building than can work with comfort adds greatly to the cost. That work is the most satisfactory and most remunerative to a builder which is done in the shortest time without incurring additional expense. If a building owner wishes to have a building done in an unreasonable time (and many do), the builder must protect himself by adding such increased price as will compensate him for increased cost and trouble. A penalty is not a terror, scarcely a risk, where fair time is allowed for doing the work and there is a fair intention to do it; but when the time is not reasonable, and there is a penalty clause, it is expedient to add the amount of the "penalty" for the difference between fair and unfair time to the original "fair" amount of the estimate. By what means the architect or building owner determines the amount to be named as "penalty" is not material to the builder. It is the amount which is of importance to him. If excessive, he should refuse to be liable; if reasonable in amount, but unreasonable in time, the builder should take care that he does not lose for the benefit of the building owner.

Risk 10, "risk of accident to the public and to workmen employed." This real risk is too little thought of by builders in making estimates. Accidents will happen, and should be insured against. Some works are more liable to accidents than others, and in a dangerous work an increased allowance should

be made to cover the risk. Accidents to the public can usually be guarded against—the cost of precautions is almost sufficient insurance against that; but accidents to workmen are frequently happening, too often from their own recklessness or carelessness, and the Employers' Liability Act has so greatly increased the risks of builders that they should provide against them, as far as possible, by direct insurance with the companies formed for the purpose, and by special insurance in each contract, according to its special circumstances.

Risk 12 is stated by Mr. RICKMAN as "the unexpected views of the intentions of the Legislature by the administrators of Acts of Parliament." This may be a risk, and it is possibly clear to Mr. RICKMAN how it affects the builder; but until it is defined by illustration or otherwise it may be passed as too remote for consideration.

Risk 14, and the last in the schedule considered to attach to builders, is "the danger of inaccuracies in the estimates." This risk may be divided into two classes, (A) inaccuracies of quantities, and (B) inaccuracies of calculations. As to (A) inaccuracy of quantities, builders ought to be relieved from any risk as to the accuracy of quantities. In tendering by competition for the benefit of the building owner, that he may get his work done at the lowest market price, the cost of making estimates is surely a sufficient burden to throw on the builders. This expense is a large one, as builders well know, and as each builder tendering in competitions must fail to obtain the majority of the work for which he tenders, the cost of the whole (forming part of the establishment charges) must be carried by the profit of the works for which he is lowest. It is the duty of the building owner to supply to the builders tendering bills of quantities, of which the accuracy is guaranteed either by himself or by responsible surveyors who are employed on his behalf to prepare the bills of quantities. For the purpose of this paper we may leave out of consideration the cases mentioned by Mr. CATES in the discussions at the Surveyors' Institution, where architects take out their own quantities and stipulate that they are not responsible for them. If builders are found foolish enough to tender for works from quantities clogged with such a proviso, their blood must be on their own heads. But in the case of builders tendering from quantities supplied by Her Majesty's Office of Works, it is desirable to make some remarks. The terms issued in the advertisements of Her Majesty's Office are—"The Commissioners do not hold themselves responsible for the accuracy of the bills of quantities, which must be verified by the persons desirous of tendering." The Commissioners are building owners. Their architects are of their own staff. They have the choice of the most qualified men to act as their surveyors. Their contracts ought to be the embodiment of all that is fair, upright, and business-like. If Her Majesty's Commissioners may take the liberty of imposing risks upon builders for which they get no consideration, to what lengths may committees for public or charitable institutions go? Or a private individual who is a building owner, why should not he say, "Her Majesty's Commissioners do not hold themselves or their surveyors responsible for the accuracy of bills of quantities supplied by them for their works, and builders take them as readily as if they had the fullest guarantee; why should I or my surveyor burden ourselves with any responsibility? Let the builders take the risk; who cares for them." It has been one object of this paper to show that no builder should take a risk or responsibility on himself without receiving an equivalent fully equal to the extent of any risk he may run. This is not a question of admitting "elasticity into contracts." The contracts with Her Majesty's Commissioners should be to execute defined works according to drawings and specifications for a defined sum. If Her Majesty's Commissioners would leave the question of quantities alone altogether, they would attain this. The competent surveyors whom they employ would willingly take the responsibility of the accuracy of bills of quantities supplied by them, which, as professional men of good standing, they are bound to do. It is not to be supposed that Her Majesty's Commissioners obtain the services of the surveyors employed by them at a lower rate than the proper professional charge because they relieve the surveyors, as well as themselves, from responsibility for accuracy. If they did so, it would take very strong language to properly characterise their conduct. Who, then, benefits by this repudiation of responsibility? Surely not Her Majesty's Commissioners, or the public whom they represent; for, other things being equal, builders would certainly tender at a lower rate under proper



and unfettered conditions than where the building owner deliberately repudiates the liability which should fall on him. It deprives Her Majesty's Commissioners of the benefit of any tenders from the very best class of builders, for, very properly, some few firms of the highest standing will not tender for any work where the conditions are unfair as these are. Certainly the builders are not benefited. A man carrying on his business in a proper way should say I will not take this additional risk without its equivalent, and if I am to "verify" these quantities I must include such sum in my estimate as will repay me for the cost I am to incur. Give me a bill of quantities fairly guaranteed and I will tender from them at the lowest market price to which I can see my way, but impose other risks on me I must be recouped in some way for taking them. Is it then the surveyors who prepare the quantities who are benefited? In the name of a worthy profession in which I have toiled some thirty-five years, I protest against any such benefit being given to the surveyors. No surveyor of respectability would shield himself behind Her Majesty's Commissioners or anyone else in disclaiming professional liability for professional work done by him. As to the person tendering verifying the bills of quantities, this is simply "a mockery, a delusion, and a snare." Have Her Majesty's Commissioners any idea what is meant by verifying bills of quantities? Items appear in bills of quantities, say 500 rods of brickwork, and 10,000 feet of stone. Do Her Majesty's Commissioners suppose that those simple items are obtained *en bloc*? Do they know that these items are the results of some hundreds of items of calculations, each of which must be gone through before the total is obtained? Given then that the intention of the advertisement is not fraudulent, it is foolish and defeats its own ends. And the sooner other counsels prevail with Her Majesty's Commissioners the better it will be for the public, the builders tendering, the surveyors, and for common honesty. Mr. CATES suggested that the Surveyors' Institution should make a representation that an advertisement of the kind was not creditable to the department. Certainly a very proper suggestion, and one which it is to be hoped the committee of the Institution will bear in mind and carry out. With the object of eliminating risk as to the accuracy of bills of quantities both from the building owner and the builder, it is often suggested that the bills of quantities should form part of the contract. If the parties interested agree on this course who shall object? The owner pays for the work actually found to be done, and the builder gets paid at his own price. What can be fairer? And the surveyor, he gets paid for taking out the quantities and for measuring the work. Very nice for the surveyor, but perhaps the building owner is not as well pleased as the surveyor. But there are often real objections to this course. It introduces an element of uncertainty into the amount to be paid and received at the end of the work which is undesirable. There are many cases in which it is essential that the building owner should know the *extent* of his liability at the outset. This cannot be done when the amount to be paid is only definitely ascertained after the works are completed. If, after knowing the extent of his liability at the commencement of the work, the building owner, by himself or his architect, varies the works during their progress, he must bear the consequences of having unsettled the defined sum. From a surveyor's point of view, the making the bills of quantities part of the contract is objectionable, from its tendency to lower the standard of accurate bills of quantities. When it was known that the works were to be measured up when the building was completed, quantities would too often be taken out in a very perfunctory way, and the principal reason for employing an intelligent surveyor would disappear. Indeed, the very *raison d'être* for the employment of a surveyor who can prepare accurate bills of quantities from drawings, more or less complete, would be gone. When the bills of quantities are made part of the contract the detailed prices should remain wholly unknown to the architect until the work is completed. Unconscious bias will have its effect, and the builder may find himself doing unprofitable substituted work without the architect reflecting that he is doing the builder a wrong.

But to turn to the consideration of risk (14) part B, "inaccuracies of calculations," a much more serious risk than the outer world imagines. Who that has had to deal with priced detailed bills of quantities but has been startled by finding errors of large amount in moneying out the prices, in the casts of the columns, in the carrying forward the amounts

from one page to another? Rods of brickwork priced at pounds, moneyed out as shillings. "Tons" moneyed out as "hundredweights" *ad infinitum*. A gross blunder is perhaps detected after the tenders are opened, the fact of being so low leading to an examination. Then the builder has either to eat "humble pie," and ask to be relieved from the consequences of his error, or to take the work with certain loss staring him in the face. It may be said that these errors of calculation are the result of carelessness. Sometimes they are. Too often they arise from the great hurry in which estimates are often prepared; but many are the result of those accidents which will happen. Other inaccuracies arise from being misled as to local prices—specially the cost of carriage and haulage. These risks, however, the builder must take. Let him exercise all the care he can by himself and by his staff, he must sometimes suffer; but the more carefully the prices are affixed by the estimating clerk, and the more carefully the whole are moneyed out and efficiently checked, the less probability there will be of error and consequent loss or humiliation.

The list of risks attaching to builders might be extended beyond that given by Mr. RICKMAN; among which risk of "bad weather" would probably be the most important, for litigation when it arises is usually from some of the causes already enumerated, and is indeed rather an effect than a cause. It is much to be lamented, however, that there are so few competent arbitrators to be found among architects and surveyors. The result is to send many references to barristers, who from their training often make better arbitrators than architects and surveyors, who have a knowledge of the technical points in dispute, but lack sense to apply this knowledge to the general issues.

Let us now give some consideration to the risks of employers—"building owners" as they have been termed throughout this paper—and we will treat these risks *en masse*.

(To be continued.)

## PARIS NOTES.

THE Minister of Fine Arts has given orders for cleaning the fine mural paintings by Hippolyte Flandrin in the church of St.-Germain-des-Prés.

An exhibition and sale of works of art, to be contributed by artists of Brussels and Paris, is being organised for the benefit of the Belgian painter Gustave de Jonghe, who has been suddenly struck down by an incurable attack of paralysis, and has a wife with several young children unprovided for.

The exhibition of eighteenth-century art, lately held at the Georges Petit gallery in the Rue de Sèze, realised 60,000 frs., and this large sum has been handed over to the association known as the Œuvre des Amis de l'Enfance (Infants' Aid Society), for the benefit of which the exhibition was held.

The engineers of the department of the Seine have drawn up plans for the construction of a bridge across the Seine between Charenton and Ivry, just outside the city boundaries. The bridge will have a total length of 24 mètres, and will immediately connect the important Rue de Seine, on the left or Ivry bank, with the Avenue des Dames on the opposite side. The cost of the bridge, without taking into account the attendant road-making, is estimated at 1,050,000 frs. Its construction will prove a great boon to the Communes of Charenton and Ivry, for at present much of the traffic between these important suburbs has to be effected by the Pont National, which lies within the fortifications, and thus occasions endless octroi formalities in the case of all exciseable goods passing over it, and, unfortunately, this category includes nearly everything that can be imagined.

An association has been recently founded in Paris under the title of the *Société des Arts Parisiens*. The object of the society is the preservation of all monuments, either of historical or artistic value, within the city boundaries. Among the organising committee are to be found the names of MM. Cabanel, Guillaume, Bailly, Ballu, Delisle, Yvon, J. Claretie, Lenoir, Ch. Normand, &c. At the first meeting of the body just held at the Cercle St.-Simon in the Boulevard St.-Germain, the last named gentleman, who is



one of the Government architects, read a paper setting forth the character and programme of the Association, and appealing to the editors of the chief Parisian papers as well as to the senators, deputies and municipal councillors for their aid in the task of preserving the numerous artistic and archæological treasures of the French capital.

The erection of the plaster model of the great porch of Bordeaux Cathedral, at the Trocadéro Museum of Comparative Sculpture, is nearly finished. In the same room will shortly be arranged the library, plans, and collection bequeathed to the city of Paris by the late Viollet-le-Duc, which are stored for the present at the Cluny Museum. The equestrian statue of *Louis de Brézé*, whose tomb already forms part of the Trocadéro collection, will also be placed in the same gallery directly the casting, now in progress, is finished.

The Musée du Louvre has lately acquired some curious drawings by Etienne Liotard, a pupil of Massé, about the year 1725; and the Versailles Galleries have received additions in the following busts by contemporary sculptors:—Claude Bernard, by M. Iselin; Berryer, by M. Barre; Décamps, by M. Noël; Leverrier, by M. Leduc; Barnave, by M. Irroy; General Decaen, by M. Dumilâtre; Ponsard, by M. Salomon; David d'Angers, by his son; Duc, by M. Ch. Lenoir; Sainte-Beuve, by M. Mousnier; Houdon, by M. Iguel; Troyon, by M. Michel; Corot, by M. Vasselot; Barye, by M. Boucher; Daubigny, by M. Durand; Diaz, by M. Fourquet; Lemaire, by M. Hébert; Littré, by Mdle. Foivart; Latour-Dumoulin, by M. Salomon; Théophile Gautier, by M. Thomas; Valentin, by M. Bailly; Dufaure, by M. Barrias.

Mdlle. Rosa Bonheur is now, we are happy to learn, completely restored to health, and has returned to the Château de By. Everyone will, moreover, be delighted to know that the artist has expressed her intention of making up for lost time, and finishing off, as quickly as may be, the many paintings and studies of animal life that were already commenced when attacked by her late severe illness.

An important question of artistic copyright is now pending before the Paris Civil Court. A Paris tailor, named Godchau, is proprietor of a small publication, half newspaper and half advertisement sheet, called the *Chronique Parisienne*, in which items of town gossip figure side by side with trade puffs. For the engravings with which his paper is illustrated, M. Godchau recently took advantage of a sale of old blocks by the *Petit Journal* to purchase those of two well-known pictures by the military painter De Neuville, *The Reconnaissance* and *The Battle of Le Bourget*, which were obtained for the modest sum of 140frs. The engravings subsequently appeared in the *Chronique Parisienne* in company with portraits of gentlemen wearing the elegant coats or walking suits supplied by the Maison Godchau. M. Goupil, the art publisher, however, who possesses the exclusive privilege of reproducing De Neuville's works, looked on this publication as an infringement of his copyright, and has brought an action to obtain the suppression of the incriminated number of the *Chronique Parisienne*, and payment of damages. M. Godchau called into the action the proprietors of the *Petit Journal*, and the latter, on their side, brought in MM. Tolmer, the printers from whom they had purchased the engravings. Both parties argue that in selling the blocks they had only disposed of the material objects, and that it was for the purchaser to obtain from the holders of the copyright the authorisation to use them. The Court has deferred judgment for a fortnight.

Good prices were obtained at the Marquis d'Osmond sale on Saturday last. A Boule cabinet, that formed part of the furniture of the royal chamber at Versailles, and which was presented by the king to the Prince de Condé, was bought for the Duke of Northumberland for 45,000 frs. Two Louis XV. vases, with paintings and decoration after Boucher, brought 86,100 frs. from M. de Aylon, who also took a Louis XIV. jardinière for 59,100 frs. A pair of Louis XVI. vases, of cylindrical form, dark blue, painted by Boucher, were taken by M. Sichel for 65,000 frs.; while a single vase, of celadon green, only 18 inches high, was run up to 51,100 frs., at which price it was sold to M. Du Sartel. The day's sale produced 17,000.

## EDINBURGH ARCHITECTURAL ASSOCIATION.

THE visiting season was opened on Saturday last by an excursion to the Canongate, in which about 70 members took part, under the guidance of Mr. John McLachlan, president. The excursionists were received in the hall of the Canongate, Tolbooth, by Mr. Skinner, town clerk, and by Mr. Robert Morham, city superintendent. The latter gentleman read a few notes, in which he explained that the building was one of the best examples of the pure Scottish Baronial style, and was erected during the reign of James VI., in 1591, as a species of town house or seat for the local Government of the Burgh of Canongate. The various alterations which the structure had undergone were detailed, and its present uses as a register office and police-station were explained. After a close inspection of the interior and exterior, Professor Baldwin Brown proposed a vote of thanks to Mr. Morham for his paper. The party thereafter proceeded to Moray House, where Mr. Maurice Paterson, the rector, met them, and exhibited prints of the house and grounds as originally executed and laid out. Mr. Andrew Kerr, late of Her Majesty's Office of Works, made a few remarks, in which he drew attention to the striking contrast between this building, erected in 1628 by Mary, Countess of Home, and the one just left. Seeing that the one building was erected as a prison and the other as a first-class residence, he made no comparison, but drew attention to the harmonious blending of Baronial Gothic and Italian, the entire absence of defensive arrangements, and the dissimilarity between it and other buildings erected in Edinburgh about the same period, which he explained by the fact of its founder being an Englishwoman in possession of considerable wealth, which enabled her to provide a comfortable residence in accordance with the ideas of the south. The interior is plain, except in the two principal rooms, where the ceilings are domed and panelled, the latter of which are filled in with beautifully designed plaster ornament, significant of much artistic power judiciously employed. It appears that the grounds as originally laid out were terraced, and contained a pleasure-house in which, it is said, the Treaty of Union was commenced to be signed. After detailing the illustrious tenants of the house, the speaker concluded by pointing out that in more modern times the building was used as the hall of the British Linen Banking Company, later as its counting-house, still later as a private residence, and now as a training school of the Free Church of Scotland. Mr. T. Croall having proposed a vote of thanks, a departure was made for Milton House, which was erected in the eighteenth century, and which, in one of its rooms, contains a wall decoration the work of a French artist named La Com. A visit was then paid to Queensberry House, regarding which Mr. John McLachlan read some notes, in which he enumerated the various occupants of the pile, and explained the several alterations which had been made in the building. He also noted that the rooms originally were decorated in a very ornate manner, and contained several richly carved marble chimney-pieces, which, on the dismantling of the house, were purchased by the Earl of Wemyss. After examining a few of the surrounding closes in a cursory manner, the proceedings terminated by an inspection of the curious house or lodge situated at the west corner of Holyrood Palace, known as Queen Mary's Bath, the history of which was explained by Mr. Kerr.

## CATHERINGTON CHURCH.

AT the meeting of the Society of Antiquaries, on February 7 (Mr. Franks, V.P., F.S.A., in the chair), a paper was read by Mr. B. Edmund Ferrey, F.S.A., entitled "Notes on the Parish Church of St. Catherine, Catherington, Hants." The lecturer commenced by describing the situation of the village on the chalk downs north of Havant, and how the tower of the church was a landmark to mariners on the Solent, so that in times of danger blue lights used to be burned at its summit. He proceeded to describe the plan of the Transition Norman church, with its nave and chancel of same width, with no chancel arch (but evidences of a rood-screen), its lean-to aisle roofs covered by a prolongation of the nave roof, and instanced the building as of a type not at all uncommon in the southern counties. Mr. Ferrey remarked on the situation of the tower at the south-west angle of the nave, with one arch opening into the nave, the other into the aisle, and spoke of the Hyde Chapel, which was a north aisle to the chancel. In the north wall of this chapel was a good thirteenth-century rear arch, nook-shafts and string. He described the nave arcade with its bold and beautiful mouldings, and explained that the south one was earlier than the north, and how the capitals of a foliated cushion-shape were much diversified. Chalk, he said, was the material used for dressings and quoins, the general material of the walls being flint. Catherington Church, which Mr. Ferrey said has just been extensively repaired and added to, had been in a very dilapidated condition, and it was during these works that some remarkable discoveries were made. Among them was mentioned the head, stem, and part of the base of the old Purbeck stone churchyard cross, of Transition Norman character. The head



was a canopied one, having the representation of the Crucifixion on one side, and the traces of a figure on the other. He drew attention to the rarity of such examples, as most of them had been destroyed. Two sepulchral slabs of late twelfth-century character with floriated crosses rudely incised were also found; also fragments of bases of piers, arch mouldings, &c., of good section, of the late Decorated or early Perpendicular period. On the north wall of the nave a tempera painting was discovered, which Mr. Ferrey considered dated from about the middle of the thirteenth century, but which Mr. Micklethwaite and Mr. Keyser—in the discussion which followed the reading of the paper—thought was early fourteenth-century work. The subject was St. Michael weighing Souls. Mr. Ferrey said the tall figure of the archangel was full of vigour. He wielded in his right hand an uplifted sword, typifying Justice. Instead of wearing armour, as usual in paintings of a later period, St. Michael was robed in a tunic (the sleeves of which were diapered) and was barefooted. A girdle was worn round the waist through which the yard of the scales was passed. The Blessed Virgin as a crowned figure, typifying Mercy, held the scales containing the saved souls, the other scales being filled with the lost ones. Mr. Ferrey described another painting which was on the east wall of the Hyde Chapel, evidently being a Trinita. It was enclosed in a pointed aureole. The Eternal Father, in the semblance of a bearded man and with nimbus, holds in his bosom the Crucified Son. The representation of the Holy Spirit is not now decipherable. On either side were figures of great beauty, of censuring angels kneeling, the surface of the wall behind being powdered. Beneath the Trinita were some elegant foliated enrichments. Above were formerly two figures of angels, one only of which now remains, bearing a harp; a musical instrument, probably a cithara, still existing on the other side. Around the splay of the circular window in the east gable of this chapel was some beautiful foliated ornamentation. Both the paintings were in a fair state of preservation, and of great value owing to their design. Mr. Ferrey went on to mention a monument of great interest in the Hyde Chapel, raised in 1631. It contained the recumbent effigies of Lord Chief Justice Hyde and his lady, the sculptured figures of their sons and daughters being represented kneeling in front of the tomb. Above was a lofty architectural composition. Mr. Ferrey proceeded to show that Lawrence Hyde, of the illustrious family of the Hydes of Hinton Daubnay, in this parish, was common ancestor of the Earls of Clarendon, Queen Mary, and Queen Anne. He said that the immediate vicinity of the church was associated with one of the later adventures of Charles II. before the Restoration, when he was so frequently a fugitive, and gave a summary from a curious and little-known MS. by Colonel Gounter, of Racton, which described it in quaint language. The king was concealed in a house near Catherington, and slept there the night before he managed to escape from Brighton by a boat to Normandy. The lecture was illustrated by drawings, most of which had been made on the spot for Mr. Ferrey by the kindness of the clerk of works, Mr. F. W. Mansel.

### A RARE COLLECTION OF GREEK ANTIQUITIES.

THE National Museum of Antiquities in the Royal Institution Edinburgh, has just received from Lady Ruthven a very important donation of an extensive and valuable collection of Grecian antiquities which has long been preserved at Winton Castle, and is well known to all the visitors of that interesting and hospitable mansion. The collection consists chiefly of Greek vases, terra-cottas, lamps, bronzes, and coins. The coins form in themselves a collection of great importance and interest, amounting to nearly 3,000 in number. They range from the earliest date B.C. to the time of the Roman Empire, and include most of the principal types of the coinage of the chief cities of Greece, Asia Minor, and the Mediterranean Isles. The bronzes include a number of mirrors of early Greek types, and a considerable variety of small statuettes and figures of animals from Greece and Italy, with portions of several specimens of large sepulchral vases of bronze of archaic character. The terra-cottas are for the most part archaic in type, including a number of painted figures of horses and other animals, presenting a suggestive resemblance to some of those recovered from the excavations at Mycenæ and the ruins in the Troad by Dr. Schliemann. The vases, which form the largest and most showy portion of the collection, are about 500 in number, some being of large size, and many of extreme beauty and rarity. They are mostly from early Greek tombs, and have, therefore, a peculiar interest in an anthropological sense, as well as a special value in connection with the illustration of the early history of art and culture in Eastern Europe. One vase of large size and globular form, ornamented with a painted border of laurel leaves, contained the burned bones of the occupant of the tomb, while others of smaller size, and many different varieties of shape and purpose, were deposited around the burial. Some of these are alabaster bottles of peculiarly graceful form, sometimes as much as 16 inches in length, intended for perfumed ointments.

But the great majority are vases of clay, finely made and beautifully decorated with painted patterns, figures of animals, or groups of figures representing mythological or heroic and legendary scenes and incidents. Their shapes are always extremely graceful, and though they present a wonderful variety of form, the principal types are readily distinguishable by their distinctive peculiarities of shape and outline. There is the *amphora*, or double-handled vase, with narrow neck and globular body tapering to the base; the *hydria*, or water-jar, of similar form, but with a flat roof and single-side handle; the *crater*, a large double-handled cup, with a spheroidal body and bell-shaped brim, used for mixing the wine and water for the banquet or for ceremonial libation; the *enochoe*, or wine-decanter, a jug-shaped vessel of extreme elegance, with trefoil-shaped mouth and handle rising gracefully above the brim; the *cylix*, a wide, shallow drinking-cup with a foot, and gracefully curved horizontal handles; the *cantharos*, a deep cup, also with a foot stalk, but with vertical handles; the *stamnos*, a broad jar shaped vessel, with a flat base and two vertical handles, usually furnished with a lid or cover; and the *lecythus*, of tall, cylindrical form, with a long narrow neck and single side handle attached. These sepulchral vases are found in the tombs of Greece proper and the Mediterranean Isles, and also in those of the Greek colonies of Magna Græcia, or Southern Italy and Sicily. It was formerly the belief of most writers that all the vases of this description found in Italy were Etruscan; but it is now known that the character of the true Etruscan pottery is totally different from that of these Greco-Italian vessels; and Jacquemart ascribes the introduction of the Greek style into Etruria to Demaratus of Corinth, who settled in Tarquinia about the year 655 B.C. In Greece, the graves in which these vases are found are usually small; but in Italy, the early Greek and Etruscan tombs are often massively constructed chambers, sometimes hewn in the solid rock, and magnificently furnished with articles of use and luxury. The number, size, and quality of the vases deposited with the burial, of course, varied with the circumstances of the individual. The ornamentation of these fragile vessels is the most peculiar feature of their character. The paste of which they are made is light and tender, often giving a body of extreme thinness, the glaze lustrous, and the colours fresh and harmonious. Millingen divides the period of the painted vases into three principal epochs—(1) The ancient style, from about 700 B.C. to 450 B.C.; (2) the fine style, from 450 B.C. to about 230 B.C.; and (3) the late style, from about 230 B.C. to the beginning of the Roman Empire. "Later than this," says Mr. Birch, "they could not have been made, for in the days of Augustus all the towns of Magna Græcia had relapsed into barbarism." It is evident that they had ceased to be made during the later days of the Roman Republic, if we judge from the fact that none are found in the ruins of Herculæum, Pompeii, or Stabiae. Splendid examples of all the styles are found in Lady Ruthven's collection. There is the archaic style, in which the whole vase is covered with chequers, meanders, and plain bars, or decorated in bands with repetitions of the figure of an animal drawn with a brush in a brownish-black on a reddish or reddish-yellow ground. Then there is the transitional style, with figures of men as well as animals, the figures still arranged in bands; the human forms tall, thin, and angular; the beards and noses pointed, the expression grotesque, and the whole figure coloured black. The fine style, representing the best period of the art, is shown by many excellent examples; the forms of the vessels exhibiting that perfect gracefulness of outline and proportion for which the Greek pottery is so famous, and the figures and drapery drawn and coloured with a spirit and skill which is peculiar to this period. Among the rarer varieties there are some vessels of peculiar shapes; and the variety of *lecythus*, which has the body coated with a white ground and the figures outlined with the utmost delicacy in a faint reddish-brown, is represented by a considerable number of beautiful examples. The black Nolan ware and the red lustrous ware, commonly called Samian, exhibit their peculiar varieties of shape and finish in considerable abundance. The number of lamps, on the other hand, is small, the lamp being a comparatively late form introduced in the time of the Roman Empire, and the bulk of the collection dating from times long anterior to the rise of Imperial Rome.

The *Scotsman* says it is understood that this magnificent collection would have been very acceptable to the British Museum, but, with characteristic patriotism, Lady Ruthven determined that it should not leave Scotland. Through her generous gift to the Scottish national collection, it now possesses a typical series of painted vases, second in importance and interest only to that of the British Museum itself. The value and importance of the donation are greatly enhanced by the fact that the collection was made during a lengthened residence in Greece and Italy, at a time when there were but few who took an interest in such pursuits, and ground had scarcely been broken in the prolific field which has since been so diligently worked by collectors of all nations.

Arrangements will be made, in the course of a week or two, for the display of the collection in the museum; but no satisfactory classification or exhibition of these treasures of ancient art can be attained in the present galleries, already crowded far beyond their capacity with other objects of antiquarian and historical interest.



## NOTES AND COMMENTS.

Two pertinent questions have been raised by Mr. RUSKIN in a letter which he wrote on Sunday last. He asks whether schools might not be instituted which should teach the rich and poor alike the arts of painting and music, and whether both these arts might not be occasionally practised by the women of England in modes beneficial to the public, yet not altogether dependent on its patronage? As regards music, it is taught in most cases without a view to patronage or the gaining of a living; but experience shows that where painting is taught, the end sought after is generally the acquisition of money. Why Mr. RUSKIN has not recognised this fact we are unable to understand. The explanation of the difference is very simple. A moderate amount of skill as a musician can always afford pleasure to others, but a corresponding degree of skill in painting or sculpture is of little advantage to anyone but the professor. Both rich and poor have opportunities to study painting, and before many years pass there will be schools for music, but as yet the line which divides rich and poor has not been effaced in the former, and it is likely to remain in the latter. Can Mr. RUSKIN devise a plan for teaching which all classes will be willing to recognise? Schools may be instituted, but who can compel the VERE DE VERES and their servants to sit on the same benches and copy the same models?

MR. RUSKIN'S museum at Walkley is now in the hands of the builders, and for several weeks to come visitors and students will be unable to enjoy the sight of the treasures which it enshrines. It will be remembered that Mr. RUSKIN lately appealed for aid towards the enlargement of the museum, in order that he might display his collection of casts from St. Mark's, Venice, and from some of the Gothic buildings of France. Whether the public have responded we are unable to tell, but a very small gallery, which resembles a conservatory in a third-rate London house, and a wing containing a few small rooms, are in course of erection. The house which was adapted by Mr. RUSKIN to a museum is of a commonplace type, and the additions are made to correspond. The agriculturists of the neighbourhood cannot understand how so plain a building can be called a museum, or be sought after by strangers. It is not to be inferred that the project for the removal of the museum to Sheffield has been abandoned. The funds for a new building in that grimy town have been guaranteed, but years must elapse before it is ready to receive Mr. RUSKIN'S gifts. Meanwhile it is better to allow the copies from Italian pictures and from TURNER'S water-colours, with Mr. RUSKIN'S elaborate studies of rocks and flowers, to be seen than to have them packed in cases as they have been hitherto. The additions are carried out with a rigid economy, and it is proposed to utilise the building hereafter for some educational purpose in connection with the St. George's guild.

MR. MADOX BROWN is daily engaged on his wall-paintings in the Manchester Town Hall, and at present he has in hand one which suggests the simple but efficient way in which the law as to Weights and Measures was put in force in the old days. The paintings which have been completed suggest how well the hall will appear when all the panels are filled in. The scheme of colour that has been employed in each case gives emphasis to the intervening piers, and the great hall will lose none of its effect. The only drawback is the contrast between the crude white in the statues, with which no colours can be assimilated. Mr. MADOX BROWN proposes to reproduce the series on a large scale by the autotype process, and as the paintings will give a poetic view of the history of Manchester from a remote age, the plates are sure to be prized in many Lancashire houses.

A LARGE number of men are daily employed in carrying out the building works at Cardiff Castle, which are under the immediate direction of Mr. FRAME, A.R.I.B.A. The plain wooden fence, dividing the castle grounds from the street, has long been considered an eyesore. It will shortly be removed and a costly boundary wall of original design be substituted. This is to consist of lengths of solid masonry and of open iron railing alternately; the latter allowing of a view of the lower

parts of the tower and other buildings. It is proposed to have figures of animals looking out over every section of the masonry—not heraldic figures, but various animals more or less ferocious, which will be copied from nature. In this way the exterior will be made to suggest the originality of the interior. Great care has been taken to preserve the sculpture and other decorations which were designed by the late Mr. BURGESS, and throughout the winter an heating apparatus with movable coils of piping is kept in every room, in order that the gilding and painting may not be affected by changes of temperature.

In the notice of the competition for the enlargement of Christ Church, Clifton, it was stated last week that Mr. JOHN NORTON had originally designed the church. That gentleman built the tower and spire only, as we stated in these columns December 28, 1878, when an interior and exterior were illustrated of the designs submitted. Mr. CHAS. HANSOM was not requested to undertake the work, but was invited to submit a design in competition, which was selected.

We trust that when the scheme for the new Admiralty and War Offices again comes before Parliament, an effort will be made to secure a worthy approach to St. James's Park from Charing Cross. From the Parliamentary papers on the subject it appears that Mr. MITFORD, the Secretary to the Commissioners of Works, has suggested the continuation of the Mall direct to Charing Cross, a change which would open a magnificent vista and lend itself in every way to imposing architectural effects. Of course additional property would have to be acquired by Government for the purpose. But the eternal want of pence that vexes public men again arises. Even so bold and unconventional a reformer of our city as Mr. LEFEVRE'S articles would show him to be, shrinks from the extra expense which this scheme would entail. So, as if the country were too poor to pay for its few great works, an incomplete and unsatisfactory scheme must be carried out, satisfying no one now, and assuredly irritating our descendants.

MR. WILLIAMS, one of the first-class surveyors in the Office of Works, has retired on a pension, having attained the age of sixty. For many years he was the only architect for Postal buildings throughout the country. His chief work was the new General Post Office West, at St. Martin's-le-Grand. We wish we could congratulate London and Mr. WILLIAMS on the work; but its exterior is condoned, we have been informed, by the interior, which is admirably arranged for its purpose.

THE successor of Mr. WILLIAMS is, we hear, Mr. HENRY TANNER, one of the younger school of architects—a gentleman favourably known already, even whilst a student, for the taste of his designs. Such an opportunity as the new General Post Office can come but seldom to an ambitious man; let us hope, however, that Mr. TANNER'S chance may be provided by the growing needs of the Government service, and, we must add, by the liberality of Parliament. Probably no civilised Government is more grudging than ours in its votes for works of architectural beauty.

THE annual distribution of prizes to the students of the Lincoln School of Art has just taken place, Mr. F. J. CLARKE, the Mayor, presiding. The accommodation for the art students of Lincoln has been for some time under consideration, and there is every likelihood that the necessary buildings will now be soon provided. The Corporation of Lincoln has already granted a site whereon the proposed schools may be built; and in his remarks on this subject the Mayor recounted the various steps that had been taken, adding that he hoped that in the course of a few days a deputation of the committee would visit Derby, Liverpool, and other towns, where schools of art had recently been built, so as to make themselves thoroughly conversant with their requirements, and so that they would be in a position to instruct their architect, and not have to ask their architect to instruct them. We presume that what the Mayor meant was this. That the committee, having by their inspection got to know something of the requirements of a school of art, they would be in a position not to obstruct their architect in his work.







The Architect, Feb<sup>y</sup> 16<sup>th</sup> 1884.



"INK-PHOTO," SPRAGUE & CO., LONDON

NORTH UNITED PRESBYTERIAN CHURCH, PERTH.

VIEW FROM MILL STREET.

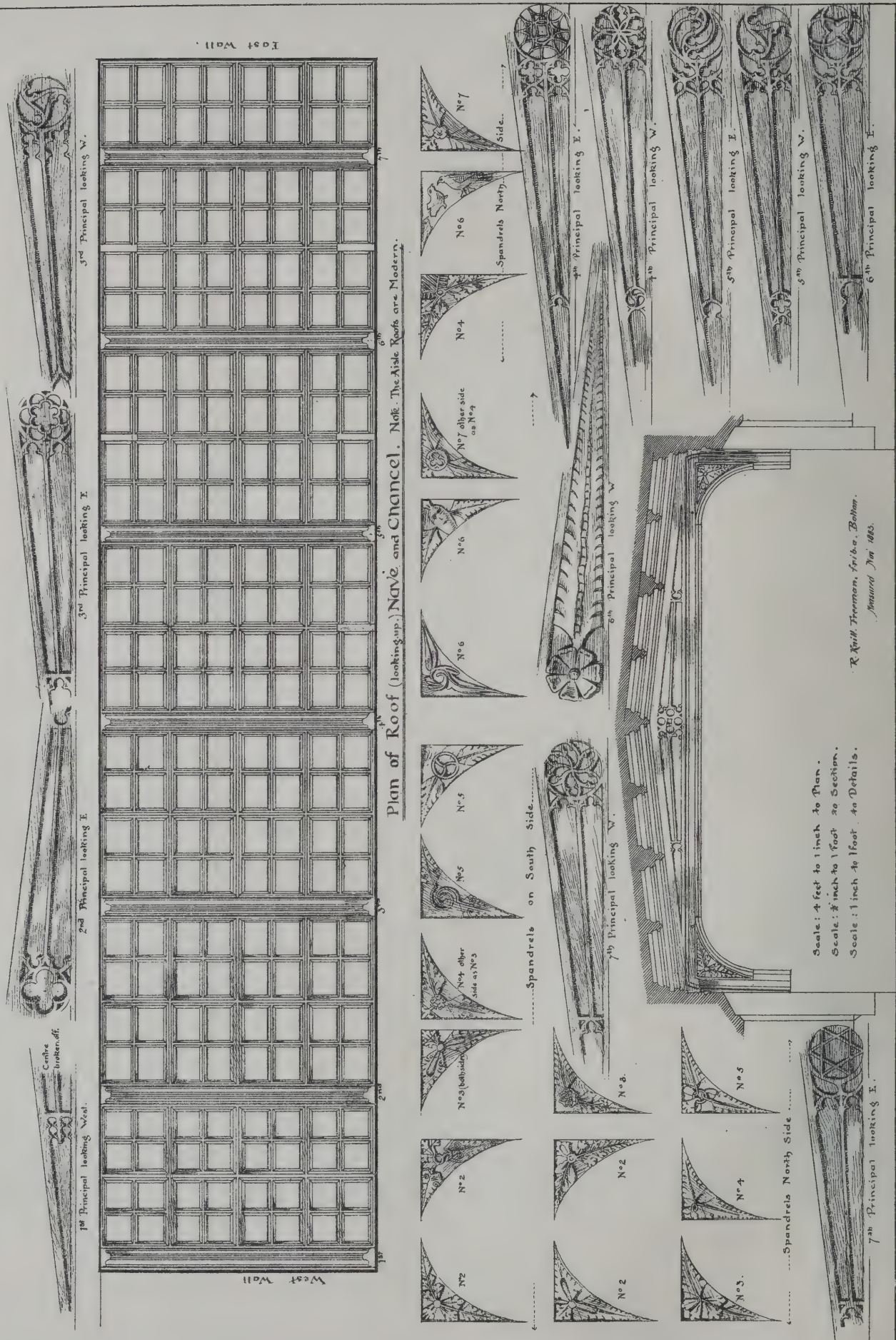
T. L. WATSON, ARCHITECT.







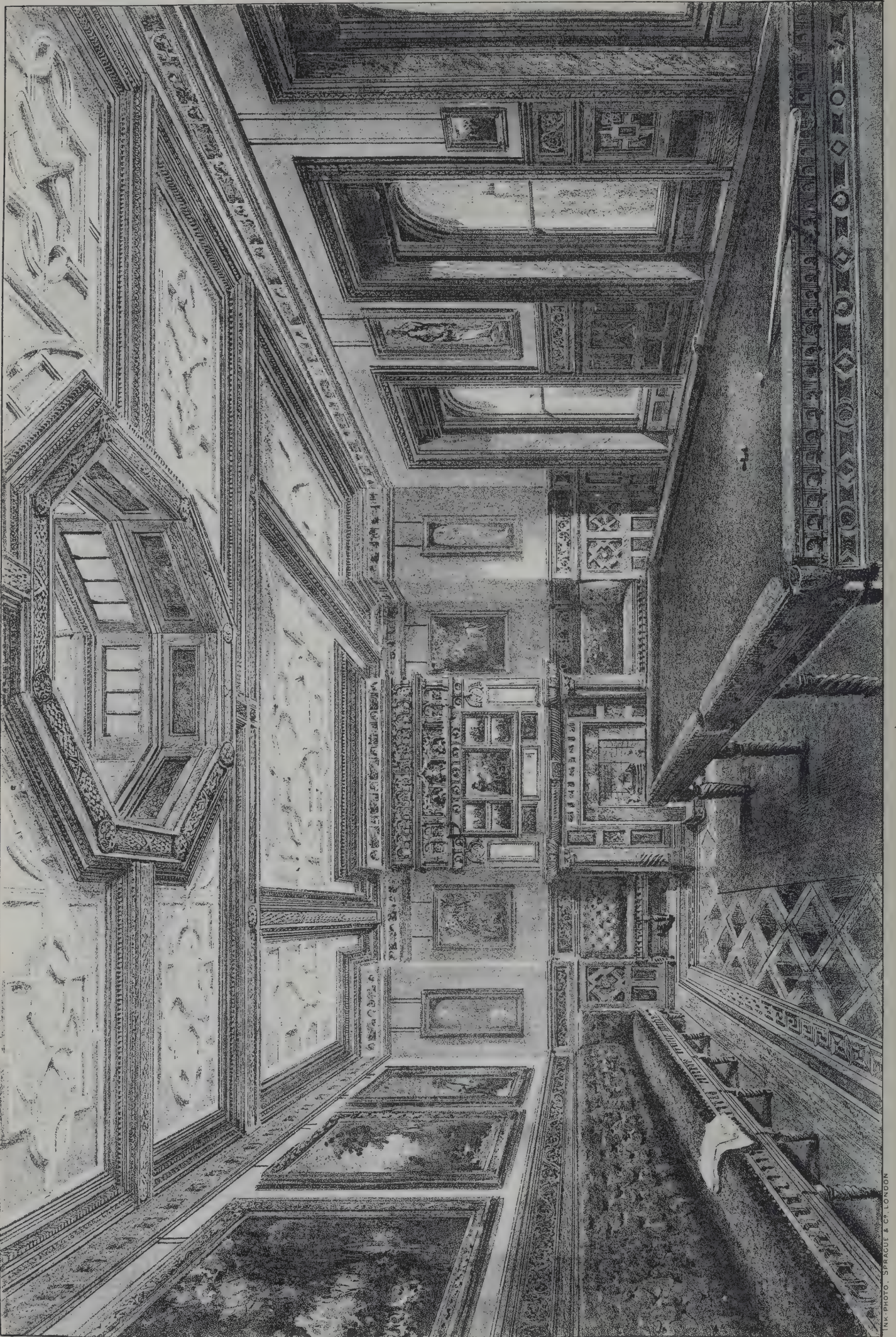
Drawing of old Oak Roof: Parish Church of Bolton











COUNTY CLUB HOUSE, BURY ST EDMUNDS.

E. F. BISSHOPP, ARCHITECT.



The Architect, Feb<sup>y</sup> 16<sup>th</sup> 1884.



INK PHOTO, SPRACUE & CO LONDON

ENLARGEMENT OF ST. MARY LE ELMS CHURCH, IPSWICH.

E. F. BISSHOPP, ARCHITECT.

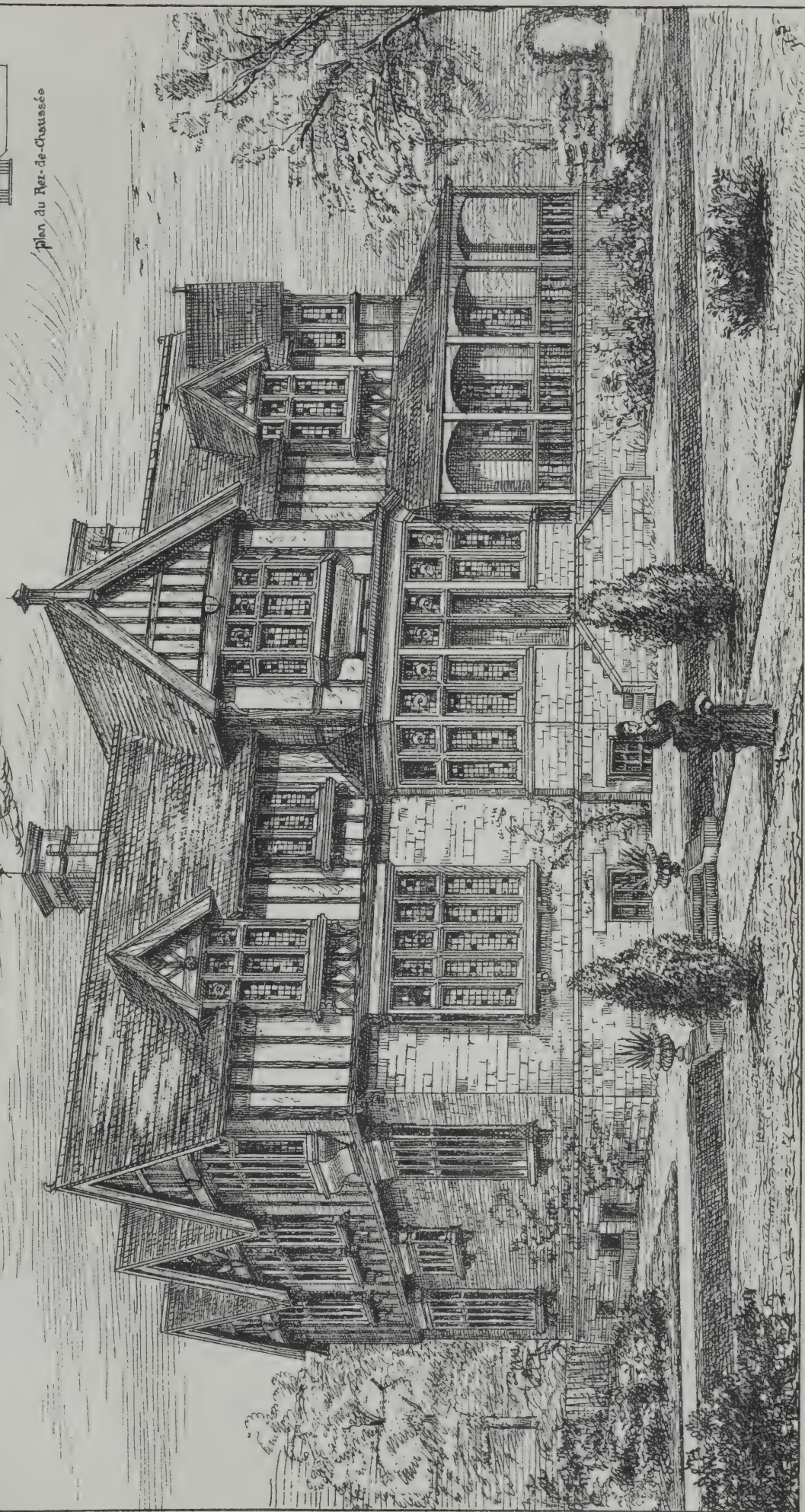
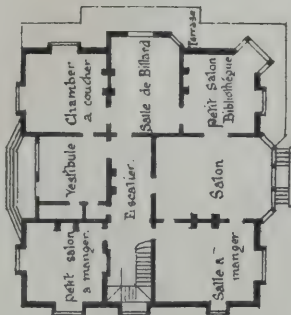






Maison de Campagne, Tours, France.  
pour M.P. Lesourd Fils,

H. Stapley, Archt<sup>t</sup>,









The Architect, Feb<sup>y</sup> 16<sup>th</sup> 1884.



"INK PHOTO," SPRAGUE & CO LONDON

NORTH UNITED PRESBYTERIAN CHURCH, PERTH.  
INTERIOR VIEW.  
T. L. WATSON, ARCHITECT.







## ILLUSTRATIONS.

NEW COUNTY CLUB-HOUSE AT BURY ST. EDMUNDS.

THIS building occupies an admirable central site at the corner of Abbeygate Street and Hatter Street, and it was finished and occupied in October of last year. There is an excellent basement in the chalk, formed out of the old cellars of the late premises which were burnt down. On the ground-floor, which is 6 feet above the pavement level, are reading-room, dining-room, staircase, hall, and vestibule, of good proportions and height, with business-room at the back. Kitchen and servants' offices are on the low-level ground-floor at the Hatter Street end. The first floor is devoted to the drawing-room, card-room, billiard-room 33 feet by 24 feet, and spacious landing and lavatories. On a mezzanine floor over the kitchen are some good bedrooms. There is an oak screen between the hall and vestibule, and the ceiling of the latter is arched and panelled in oak. The floor of the hall is in parquetry, laid by Mr. EBNER, and the rooms are fitted up with oak and walnut chimney-pieces designed by the architect, from whose designs also the whole of the joiner's work and other details have been executed. The fronts are in the best

part of the north aisle being of the latter date. Some parts of the south wall are probably old; but there are modern buttresses, windows, and facings, and this wall is considerably out of the perpendicular. The principal additions have taken place at the east end, where a new chancel (shown in the illustration) has been built, 27 feet long by 17 feet wide, and of good height. The roof is of oak, of single hammer-beam construction, elaborately wrought. The ends of the hammer-beams are finished with angels, and the cornice is enriched with angels, pateræ, and tracery. An organ chamber has been built on the south side, with temporary vestry on the north. The jambs of the windows in the sanctuary are carried down, forming sedilia and credence. The chancel arch is new, and richly carved on both sides with emblems of the Death, Passion, and Ascension of our Lord. The north aisle has been lengthened eastwards, and two stone arches and piers forming the commencement of the new arcades inserted. The choir fronts and clergy desks are in oak, enriched with emblematic carvings and tracery. The floor of the chancel and sanctuary are in mosaic, supplied and laid by Messrs. DIESPEKER & Co. The whole of the work has been carried out from the designs and under the superintendence of Mr. E. F. BISSHOPP, architect, of Ipswich.



COUNTY CLUB HOUSE, BURY ST. EDMUNDS.

Woolpit red brick, the rubbed and gauged moulded work being executed in BROWN'S Braintree bricks, executed from the architect's special designs. The accompanying illustration of the interior of the billiard-room was prepared by the architect for a member of the club. It is shown to be finished in oak, with painted walls and plaster ceiling. On the chimney-piece would be carvings characteristic of the four seasons, with busts of the QUEEN, Prince of WALES, and his eldest son; and beneath these an oil-painting representing a meet of the West Suffolk Hunt. Messrs. SAUNDERS & SONS, of Dedham, Essex, were the contractors, and they have executed the work in a highly creditable manner; the architect being Mr. E. F. BISSHOPP, of Ipswich.

ENLARGEMENT OF ST. MARY-LE-ELMS CHURCH, IPSWICH.

THIS church, after being closed for some months for enlargement, has just been reopened for Divine service. The church is of ancient origin, and contains the only piece of Norman work in Ipswich, namely, the arch and jambs to the inner door of the south porch. There are also some remarkably quaint hinges to the door, probably of the date of the fourteenth century. On the exterior of the porch are the remains of three mutilated canopied niches. The church has from time to time been considerably added to, principally in the sixteenth and seventeenth centuries, the brick tower and

Mr. GEORGE KENNEY, of Ipswich, was the general contractor, and he has well and carefully executed the work, with Mr. HARPHAM as mason. Messrs. GROOM & SON executed the wood carvings, and Mr. KINNELL the stone carving.

MAISON DE CAMPAGNE, TOURS.

THIS house is proposed to be erected at Tours for M. LESOURD. The general disposition of the rooms is from dimensions and suggestions supplied by the owner. The principal view is from the grand and *petit salon* overlooking the river. The tradesmen's entrance, kitchen, scullery, butler's pantry, pantry larder, wine and beer cellars, fuel and brushing rooms are in the basement. The ground floor is as shown, the principal rooms opening on to the verandah. The bedroom floor contains six bed and six dressing-rooms, communicating bath-room, &c.

The walls are not proposed to be constructed as shown in perspective, the only stone and brickwork being in the basement below the plinth; ground floor above the ground level to be of timber construction, formed of angle posts 9 inches by 9 inches, boarded on the outside, studded, lathed, and pricked up in the centre, and on the inside lath and plaster, with cavity between each, so as to resist the heat in summer and the cold in winter; the fittings to be of pitch



pine. The architect is Mr. H. STAPLEY, of 51 Wool Exchange, Coleman Street, E.C.

#### NORTH UNITED PRESBYTERIAN CHURCH, PERTH.

THIS church was built about five years ago for the leading United Presbyterian congregation in Perth. Its internal dimensions are 84 feet long by 56 feet wide, and it gives sitting accommodation for over 1,200 persons. The aim in designing it has been to provide a spacious building suited to the wants of the Presbyterian form of worship. From every seat an uninterrupted view of the preacher is obtained, and the acoustics of the building, which were the subject of careful study, are of the most satisfactory character. The central front of the interior, as shown by our illustration, is waggon-vaulted and ribbed in plaster, while the side compartments are covered with flat domes. The cost of the building was within 7,000/. The principal contractors were Messrs. CRAIG & AULD, Motherwell. The carving was by Mr. HARRY HEWS, of Exeter, and the glass by Messrs. ADAM & SMALL, of Glasgow. The architect was Mr. T. L. WATSON, of Glasgow.

#### DEANE CHURCH ROOF.

### ON COLOUR DECORATION.

By J. D. CRACE.

(Continued from page 95.)

PUTTING aside for separate consideration the question of mosaic decoration, it may not be amiss here to consider the treatment of the interior of domes or cupolas, often the culminating point of a grand decorative work. The sectional curves of cupolas, of course, vary infinitely, and the rules which should guide their decorative treatment must, therefore, of necessity be somewhat elastic. Nevertheless, one master-rule may be said to apply invariably. It is that the vertical section or contour must be expressed and explained by the decoration, whether in moulded surface or in colours. This expression may be made to assist or modify the actual curve, but in some form it is essential. Without it an appearance of distortion, or of instability, or of confusion, is almost inevitable.

The methods of explaining the interior contour are numerous, and their several employments may be suggested by the varying conditions of scale, light, proportion, or actual contour. In domes which vertically exceed the hemisphere, a vertical division into "sectors" is by far the most direct and satisfactory means of expressing the curve. The strongly-defined vertical rib or band offers to the eye the readiest means of traversing the surface upwards. The intervening spaces may then be subdivided simply or elaborately, by horizontal lines or by curved lines according to the further explanation or elaboration demanded.

One subordinate axiom as to this vertical division may be noted. It may be taken generally that the higher the curve of the dome, the more numerous should be the vertical lines. Thus a low flat dome may be divided by vertical bands into four parts or sections; but a high dome to receive a full expression needs to be divided into eight, twelve, sixteen, or more sections. The amount of horizontal division is generally far less important. Perhaps the explanation of this is that the eye perceives from the first that the horizontal section is circular, whereas the vertical section must always be unknown and demand explanation.

When the dome is altogether on a large scale, it is essential that the vertical lines be expressed with more strength than any others. They contribute immensely to constructive expression, and to that effect of nobility which is given by height.\* There are, of course, plenty of well-known examples in which no systematic division has been adopted. In some early domes, usually of rather low section, figures are placed vertically on the unbroken curved surface. In such cases it is not easy to forget the distortion of those figures which do not face the spectator. In other instances the surface is simply diapered with scroll or ornament. Of these I will presently say a word. In others, again (very few), figures or ornaments are arranged in horizontal bands or storeys, which may be considered as the least satisfactory of all arrangements; but it is common to all these arrangements that the spectator can

receive no impression of the contour or vertical section which it is in the very essence of the thing should impress him. Without the vertical expression all that noble effect of stability and lightness, of solid structure soaring upwards by its own growth, and with symmetrical perfection, is exchanged for uncertainty, and that curious mental demand for explanation which is a sure sign of defect in the artistic quality of architecture. It may be permitted the spectator of a great iron tubular bridge to "wonder how it is done"; for no sense of beauty is appealed to. But to the architect or his decorator the mere question is a severe criticism, if beauty has been his aim.

I have said that there are samples of domes in which the whole interior surface is merely diapered. It must, however, be noticed that if this diapering be such as, being set out upon geometrical lines, diminishes during its repetition upward, in strict proportion to the diminishing diameter of the dome, it does, in fact, partly answer the same end as the more obvious vertical lines. It is the mode of decoration most frequently adopted in the domes of Arabian architecture, and (if the dome be not very large) undoubtedly possesses a peculiar charm when aided by harmonious colouring—a charm partly due to a certain sense of mystery which pervades so much of Oriental art, and which powerfully affects the imagination. This influence, attained by geometrical forms and pure ornament, aided by colour alone, is very remarkable, and deserves careful investigation.

The staircase is another important feature in every house; and since its decorative treatment often presents difficulties, it seems desirable to consider how they may best be met. I speak now not of such staircases as are to be found in large mansions or in public buildings, where architectural effect has been possible and has been studied, but of those narrow or shapeless spaces which enclose the successive "flights" of the ordinary town house. In these one is confronted by the most irregularly-shaped wall surfaces, which usually succeed each other from ground floor to attic without break or definition. They are literally staircases, having walls "without form and void," overshadowed by a succession of equally shapeless raking soffits, with no expression of support, and unrelieved by so much as a moulding. This is obviously not encouraging ground for the decorator, who usually arranges the dado of despair, tints or papers the unmanageable polygons above it, and retires baffled. If he has been allowed to use a scrolling pattern in dismal greens, he has perhaps the happy consciousness that he has imparted an "art tone" to the house by his treatment of the staircase, up which the visitor gropes his way in a monotony of green fog. But this is "fashion," not "art."

Where it is practicable—and it is so in some of these staircases—it is very desirable to make a broad distinction of colouring between the lower and upper storeys, inserting a sort of string-course at the level of, perhaps, the first floor. This at once gives breadth and stability of appearance, and helps to counteract that effect of perpetual treadmill, which is so unpleasant in mounting an ordinary London staircase. Where it is not possible satisfactorily to effect this marked horizontal division, it is possible, and frequently advantageous, to adopt such a design of decoration or paper-hanging as admits of the repetition of horizontal lines at brief intervals. This was the one good feature of the old marbled papers in blocks, and which still leads people to assert that a staircase looks larger with a marbled paper, the sense of width being in fact due to the horizontal joints, not to the figure of the marble. Designers who have perceived this fact now produce patterns arranged on the same block system, and suitable for narrow staircases.

Where an open well-staircase exists, with stairs to the first or second floors only, and open wall above, much may be done with moderate use of colour in cornice and frieze to give a value to the whole. In such cases there should certainly be a well-defined frieze or string-course at the level at which the stairs cease.

The soffits of the stairs may often be advantageously panelled out with mouldings, but where they are the plain soffits of stone stairs this is not very readily managed, and one must then have recourse to colour. A very simple use of even coloured lines will often be of considerable value. Again, much may be done to relieve the meanness and monotony of a London staircase by making a sort of vestibule or separate feature of one of the principal landings, and concentrating there your richer colouring and ornamentation instead of frittering them away in dribbles over the whole.

The use of stained glass in one form or another has become so frequent for domestic purposes that it is no longer necessary to advocate it. Perhaps it is rather necessary to ask for discrimination in its use. It does not accord well with light tints of pure tones in the decoration; but with low tones, whether light or dark, and with deep rich tones of colour it may usually be adjusted harmoniously. There are, of course, some restrictions connected with style which it is well to observe, because no mind trained in the history of art can altogether shake off those impressions of fitness or incongruity which are the direct result of such training.

It is not my present purpose to go into the subject of colour harmonies, but rather to treat of the general laws and conditions which should influence the use of colour in decoration. It may not be out of place, therefore, to allude briefly to some of the unex-

\* The division of the interior of the dome of St. Peter's, and its expression by colour, may be quoted as an admirable example both for effect and simplicity. The interior dome of the Sorbonne at Paris is very similarly dealt with. That of the "Invalides" is divided into alternate plain and coffered "sectors," the latter each consisting of a single vertical row of diminishing coffers. The Chigi Chapel at Rome has a low cupola divided into wide and narrow panels alternately. The dome of San Francesco at Naples, like that of the Pantheon at Rome, is entirely divided into square "coffers," diminishing upwards; but both these have rather low sections.



pected difficulties which crop up in practical decoration. In the first place, to allow for the very astonishing differences between the colour as it appears on the palette, and when transferred to the surface of ceiling or wall requires a considerable practical apprenticeship. Even a very large experience is insufficient to prepare one for the strange and fantastic tricks of reflected light; and it must be borne in mind that all ceilings are, by day, lighted entirely by reflected light. Hence it makes all the difference in the world to your colours whether there be a pavement, or grass, or a gravel path immediately outside your windows. So does it whether your floor is ultimately to be covered by a dark carpet, or by, perhaps, a yellow matting, especially as you must know how to allow for either, since they cannot be laid down whilst your work is in progress. Your difficulties are, likewise, largely increased by the false shadows and reflections thrown on the ceiling by your scaffold. This is a fertile cause of mistakes in colouring, and I would especially warn you against a scaffolding which has been used by the plasterers, the whitened boards falsifying the light on your work to your ultimate embarrassment. On this account when any critical point in the work is reached for the decision of questions of colour a good large space should be cleared of scaffold-boards. A fall of snow compels a complete pause, so far as adjustment of colours is concerned, the conditions under which the light is reflected being rendered completely abnormal. It is but a few weeks ago that in some very simple work in London I found myself frequently at fault in one front room, and discovered that this difficulty was entirely due to red blinds drawn down in some windows of a house on the other side of the street; though by no means directly opposite they were at such an angle to the room at the hour of my visit as exactly to reflect direct rays of red-tinted light into my room. I have in former lectures spoken at length on the use of gilding in decoration, but cannot altogether pass it by here. Properly used it is most valuable, serving, as it does, several distinct purposes. It is valuable for explaining form, for lighting up surface ornament, for separating colours, and for the mellowing effect it has on all colouring. It gives the decorator a ready means of "emphasis," serving to carry the eye to the right points and along the right lines, even in the shadowed parts of the work, or where the colouring is deep enough to make emphasis of colour alone difficult. It should be borne in mind that gilding, to be successful, must be used boldly and with very defined purpose, because in some lights you will see the gilding when you cannot distinguish colours. Timid gilding, in meagre lines or detached patches, is always to be avoided. It has the same sort of effect as cheap finery, and is destructive of repose.

Gilding, properly used, even where very freely used, never looks tawdry or vulgar; and where you find an interior spoken of as vulgar or tawdry from over-gilding, you may depend upon it that it is less the quantity of gold than its being in the wrong places which has produced the effect.

Reverting, indeed, to the question of "emphasis" in decoration, whether by gilding or otherwise, I may say that nothing is more essential to the success of any decoration. Its absence or insufficiency make any arrangement of colour very much what writing is without punctuation, or what speeches are without aspirates. Just in the same way the use of purposeless and patchy gilding makes of a decoration much what misplaced aspirates make of a speech—an unintelligible and vulgar jargon.

The use of gold ground mosaic for the purposes of decoration is a subject in itself, and I will only briefly allude to it here. A magnificent material for work of a monumental character, it seems to me unfitted to use promiscuously or in small patches, and on the level of the eye. I venture to protest altogether against its use for pictorial purposes in the small panels of a reredos, for instance. It can only be used with really adequate effect on large surfaces free from mouldings. It is worth while to turn to Ruskin's "Stones of Venice," and read his remarks on incrustated decoration ("St. Mark's," pp. 23, 24), which are full of true artistic perception of fitness.

The use of natural products, such as wood or marble, as part of the colour scheme of any interior, is a very excellent thing, and has made great progress of late years, though I have known architects paint handsome oak balustrades white for fashion's sake. The decorator must, however, bear in mind that these natural colours are for the most part very quiet in tone, and that careful modulation of tone is necessary in all the painted ornament that is to harmonise with them. All woods (with rare exceptions) belong, in colour, to the "low tertiary" class; and pale bright tones do not readily harmonise with them, although colours may be so used with them as to appear pure and bright. Marbles are of purer tones than wood, and admit of a somewhat brighter scale. No natural material lends itself more favourably to decoration, the mottled and varied combinations of colour in many marbles being most helpful to the general harmony.

Mr. COLE A. ADAMS, the President, said that Mr. Crace had spoken from the valuable standpoint of experience. He was glad to find stress was laid on ceiling decoration; the more he thought of this form of decoration the more inclined he was to advocate it. Mr. Crace had spoken of certain difficulties from reflected light when working with colour; for instance, during a fall of

snow. He had seen a curious example of this in a billiard-room, the ceiling of which was a deep rich green colour spangled with stars, having the cornice red, picked out with black. When the billiard-table was in use the ceiling was more or less in gloom; but when the white cloth was thrown over the table an effect was produced like that of a transformation scene. The Chairman said that at a previous meeting several speakers had condemned the introduction of swags or festoons on flat surfaces, and he would like to know whether Mr. Crace considered such treatment legitimate. He differed with Mr. Crace as to the use of gilding. Gold might, he believed, be used with effect if sparingly introduced here and there in spots or points among flowers and foliage. The use of mosaic, as seen in reredoses and various other parts of churches, was, in his opinion, disappointing. According to the late Mr. Street, the proper use of mosaic was to employ it on a large scale and on lofty curved surfaces, such as on the interior of a dome.

Mr. H. H. STANNUS proposed a vote of thanks to Mr. Crace for his paper. That gentleman had pointed out that by emphasising the margin, the effect of height in the centre of the ceiling is obtained, and therefore the use of swags was allowable, as also where the effect of a barrel vault or a covered ceiling was to be produced. In fanciful decoration also it was allowable, and it was found in Pompeian and Roman work. He heartily agreed with the rules Mr. Crace had laid down for the treatment of cupolas; but for obvious reasons he would not enlarge on that point. He queried whether it was desirable to decorate a staircase at all, or, at any rate, to any degree that would take a person's attention away from minding his footsteps. Decoration should rather be confined to the landings.

Mr. A. B. PITE said he had always regarded colour as a sort of panacea of the architect's woes. In a utilitarian age when one was asked concerning everything, What is the use of it? colour was the one and only element in nature which had no objection attaching to it. Neither need an architect when using it fear district surveyors or the Metropolitan Board of Works. Colour was not to be studied simply in relation to architecture; they must go to nature for it. When told to study architecture from nature or the past, they required a guardian angel like Ruskin to direct their steps. But for colour they need not go abroad; colour was to be found in London, even in the gorgeous sunsets of late. Colour was regardless of form, so, if the architecture was bad, by all means let them prop it up with colour. Nature gave us colour that we might enjoy it, and enjoy it for its own sake alone, and disregardless of form. Mr. Pite remarked on the gorgeous blaze of colour seen in birds of paradise, parrots, &c., and observed that the stripes of the quagga did not follow the outlines of the animal's form and limbs. Nature had not treated its legs as pilasters.

Mr. J. G. CRACE, sen., said he entirely disagreed with the previous speaker that colour should be used independently of form. Colour could not fail to be incongruous unless in some degree it harmonised with the forms to be emphasised or delineated. Colour, indeed, when rightly used, was a grand thing. What music was to the ear, that colour was to the eye, and in our sooty atmosphere, where everything so soon became besmirched, colour gave a relief that nothing else could. He wished that colour were more commonly seen on ceilings. Houses would then be far and away more cheerful, but the ornament should be suited to the room, not inharmonious, heavy, or gross.

Mr. H. W. PRATT said he believed after what they had heard they would all carry away the idea that they could materially help the decorator by designing work with a view to its being decorated.

Mr. H. D. APPLETON thought it was impossible to lay down hard-and-fast rules for colour. There was a certain freedom about colour, so that individual likes and dislikes would always exercise considerable weight; and it seemed to him quite true of colour that what was one man's meat was another man's poison.

The vote of thanks was then put by the President to the meeting and carried by acclamation.

Mr. CRACE acknowledged the compliment, and, in reply to the observations passed by various speakers, first alluded to the use of festoons or swags on ceilings, and said he considered that, from the point of view taken by Mr. Stannus, that gentleman's answer was correct; but he qualified it to this extent, that in some cases the impression would be that of a slightly curved ceiling. All flat ceilings, as they receded, appeared to have the edge that was furthest removed from the eye lower than the centre, and for this reason the decoration must be designed in a precisely opposite direction to that followed when designing a carpet, and thus the edge of the ceiling furthest removed from one became the lowest edge in the artistic sense. As a rule, it was most disheartening to attempt to decorate the average London staircase, except on the landings. The most that could be done in the attempt was not to leave it worse than it was at starting. Without absolutely ornamenting it, some relief and some appearance of width and support might be given it. He did not read nature as Mr. Pite did, namely, that colour was disregarding of form. To take the example of the quagga and its stripes, the alternations of yellow and black were distributed very systematically, according to the conformation of limbs, length of body, &c. The limbs were not synonymous



with columns or pilasters, for they were moving things, and so colour was not applied to them in geometrical forms. Such forms would be absolutely unsuitable to columns which constantly changed their form. The colour consequently followed irregular outlines, which did not get broken up when the limbs of the animal were in motion. In the case of buildings these conditions were reversed. The colour treatment must be precisely opposite, for the first thing was to give buildings an appearance of immovable stability.

### ART AND ARCHITECTURE IN ENGLAND.

LORD WINDSOR on Friday in last week distributed the prizes to the students of the Bromsgrove School of Art. In addressing the students he reminded them of the importance of art schools, and what benefits there were from an art school in such a town as Bromsgrove. In England, he said, they had been sometimes accused of bad taste in decorative art; but that they were much behind other countries in that respect he doubted. That in foreign countries they found certain things more artistically done than in England was a fact; but he attributed that mainly, if not altogether, to the fact that in Italy, and in most of the other great European countries, they had got that copy which was so much better than we had in England. But copy was not invention, and, as far as inventive taste went, he did not think that England need be ashamed of herself. In England we could boast of some very fine buildings, but he thought the finest were the ancient ecclesiastical monuments, nearly all of the Gothic order. But however much the Gothic style of architecture was adapted to cathedrals and churches—and he thought the Gothic architecture was pre-eminent for that purpose—he did not think that Gothic details and Gothic decoration could be tacked on to the more homely style of decoration that was fitted for use in houses and edifices of smaller dimensions than cathedrals and churches. He then referred to the architectural beauties to be found in Italy, and said he thought that the style adopted in that country was the best for domestic purposes. In allusion to the great value of painting, he expressed his opinion that the study of landscape painting helped one to appreciate materially the beauties and varieties of nature. As to the position England now held in regard to painting, he believed that the English school was certainly better than the school of any other country at the present time.

### ARTISANS' DWELLINGS.

THE half-yearly report of the Improved Industrial Dwellings Company, Limited, has been issued, from which it appears that the company now possess thirty-three estates in various parts of the metropolis, on which 4,314 dwellings have been erected and are in occupation, and 640 are in course of erection, making a total of 4,954 tenements. When these are completed the number of persons residing in the company's dwellings will be about 25,000. The report states that the buildings at the City Road Estate were completed in September, and occupied early in October, the number of applications for the eighty-three dwellings having been 382, these dwellings being the first that have been completed by the company under "The Artisans and Labourers' Dwellings Act, 1875." The buildings in High Street, Islington, were completed in November, and occupied in December. For the eighty dwellings at this estate there were 323 applicants. The drawings and specifications for the Mint Street, Borough, Estate were not returned finally approved until October last, or fifteen months after they were first submitted to the Metropolitan Board of Works, and the directors at once put in hand the necessary preliminary work. When ready to proceed with the superstructure—the foundations, drains, and area walls having been nearly completed—a further and most serious difficulty arose by the Metropolitan Board of Works advertising their intention to apply to Parliament for an extension of time in respect of the new street from St. George's Church to Southwark Bridge Road, thus proposing to further defer the completion of the Board's obligation to the company, the Board having sold with the site a frontage to the new street. Proposals have been made to the Board in the matter; but the directors have in the meantime felt it necessary to stop the works, and are taking steps to protect the interests of the company. The buildings at the new street in Soho are proceeding satisfactorily, and it is hoped that the estate will be completed within the time stipulated in the agreement. The directors have acquired from the Metropolitan Board of Works the site referred to in the concluding paragraph of their last report. This consists of nearly an acre of freehold land in Linton Street between Carlisle Street and Edgware Road, close to the Edgware Road Station of the Metropolitan Railway, and only a few minutes' walk from Oxford Street. Plans have been prepared and provisionally approved for the accommodation of about 700 persons. The site is in the centre of a densely-crowded locality, and is one that was acquired by the Metropolitan Board of Works under the Artisans and Labourers' Dwellings Act, 1875.

### THE CENTRAL INSTITUTION.

THE Central Institution of the City and Guilds of London Institute in the Exhibition Road, South Kensington, is now approaching completion, and the Executive Committee are proceeding to appoint, in the first instance, four professors to the chairs of chemistry, of engineering, of physics, and of mechanics and mathematics respectively. The salary attached to each professorship will be 1,000*l.* per annum, with a prospect of increase depending upon the number of students in attendance. It is expected that the appointments will be made during the next few weeks. The council of the Institute, at the request of the Duke of Buckingham and Chandos, have consented to lend, during the summer months, and pending the preparation of the fittings, a portion of the Central Institution to the Commissioners of the International Health Exhibition for the display of appliances for scientific and technical instruction, and of the work done in technical schools here and abroad.

### MURAL PAINTING.\*

IT has been thought by some that the paintings discovered in the excavations at Pompeii and elsewhere are evidence that the ancients were in possession of a process that would insure the permanence of paintings for some two thousand years at least, and doubt was thrown, therefore, for a time, on the possibility of their being fresco-work. But recent examination, while it has proved their claims to be classed among genuine fresco-paintings, has also explained the seeming mystery of their permanent qualities. In the first place, it must be borne in mind that they have been preserved from the action of air and light, and in some degree at least of damp also, for almost the whole of their existence; and in the next place, their apparently indestructible character has vanished before those simple tests to which fresco-painting has invariably succumbed. All such paintings as have been, since their excavation, exposed to the action of the weather have undergone rapid decay; so much so, indeed, that within the short space of nine years some of them have almost entirely disappeared. Most, if not all, of the modern substitutes for fresco, such as wax colour, casein as employed abroad, do not profess to be capable of resisting the influence of weather when exposed to the open air. Mr. Gambier Parry's process of "spirit fresco" appears to contain merits beyond such methods as are employed abroad, but, like them, it is not intended for exposure to the open air.

The process, which it is my privilege to introduce to your notice this evening, is based on the stereo-chrome process of Schlotthauer and Fuchs, differing however from that in such important particulars as to constitute, practically, an entirely new process of itself. In the year 1818, Professor Schlotthauer, of the Munich Academy, who had for some time been engaged in experiments with a view to discovering some permanent process for mural paintings, turned his attention to the substance known as water-glass (silicate of sodium), the invention of the chemist Fuchs. The result was the adoption of the stereo-chrome process. In this process the surface to be painted on consisted of an ordinary mortar of lime and sand, impregnated with water-glass. Upon this surface the painting was executed in water-colour, and was then fixed by water-glass thrown against the surface in the form of a fine spray, the water-glass in this case forming the fixative for the painting. In practice, it soon became evident that a simple spraying of water-glass, applied to heterogeneous pigments, without reference to their peculiar properties as regards chemical composition, cohesive capability, &c., was not sufficient to insure their permanence. Certain colours in particular, as ultramarine, umber, and black, were observed to be always the first to detach themselves, in the form of powder, or by scaling off from the painting, thus pointing to the fact that their destruction was not owing to any accidental defect in the manner of their application, but to some radical unsuitability arising from the chemical conditions of the process.

In Mr. Keim's process great regard is paid in the first instance to the ground upon which the painting is to be executed. A careful study of the best examples of the fresco paintings of former times convinced him that the painting ground was a feature of supreme importance. I have here some fragments of Pompeian wall-paintings, which will illustrate the extreme care which was bestowed at that time upon the preparation of the wall surface. An examination of them shows that two different qualities of mortar, in distinct layers, were employed in their construction. That which lay underneath is coarser in texture, but very firm, and evenly mixed. Upon this is laid a very thin coating of a much finer composition, spread over the surface with the greatest care and accuracy. Here is a fragment of a Roman fresco, from Bavaria, of a much later date. The different character of the

\* Extracted from a paper read by the Rev. J. A. Rivington, M.A., at the meeting of the Society of Arts, February 13 entitled "A New Process for Producing Permanent Mural Paintings, invented by Adolf Keim, of Munich."



mortar can be seen at a glance. There is only one coating, and that not only far coarser than even the first coating of the Pompeian fresco grounds, but very roughly and carelessly mixed. No trouble appears to have been taken to sift the sand so as to produce evenness of texture, as is evident by the presence of small stones and lumps occurring throughout. The deterioration of character in the later specimen is very marked. In Mr. Keim's process great care is taken that the wall to be treated contains no damp or decaying stones or bricks, and the latter must have been sufficiently baked, otherwise they will develop an efflorescence most injurious to the process. If the wall be already covered with stucco or mortar, this will serve as the first ground, provided it be in a thoroughly sound and dry condition, and it will then be sufficient to clean and level it before applying the second, or painting ground. If not, the stucco must be cleared off, the bricks laid bare, and the mortar between the bricks picked out to a depth of about three-quarters of an inch. This more thorough preparation is always preferable in a work of greater importance, or where special pains are advisable to secure durability, as, for instance, when undertaking the exterior decoration of a building. Upon this surface a thin squirting is cast, composed of the following mortar:—Coarse quartz sand, infusorial earth, and powdered marble, mixed in certain proportions. Of this mixture four parts are taken to one part of quicklime, slaked with distilled water. Upon this squirting-cast, the object of which is to secure adhesion to the surface of the wall, follows mortar of ordinary consistency, composed of the same ingredients, to fill up all inequalities and produce a smooth surface, and upon this again the second or painting ground is applied. The painting ground is composed of the finest white quartz sand, marble sand artificially prepared and free from dust, marble meal, and calcined fossil meal (infusorial earth). The sand composed of these materials, carefully mixed in the proper proportions, is mixed with quicklime slaked with parts of distilled water, in the proportion of eight parts sand to one part slaked lime. This mortar is applied to the wall as thin as possible, not exceeding one-eighth to one-quarter inch in depth.

For work executed on the exterior of buildings, Mr. Keim recommends the employment of pumice sand in addition to the other ingredients of the mortar. When coated with a stucco of this composition the wall presents so hard a surface as to admit of sparks being struck from it with a steel. It is absolutely essential that throughout the work only distilled or filtered rain-water be employed. The reason for this is to obviate any possibility of the water containing lime, as that would affect the solution employed for fixing so as to impair the effect of the painting. The intense power of increased durability which Mr. Keim obtains by these improvements can be best estimated by a regard to the fact that paintings executed by the stereo-chrome process, while they have for the most part lost the coating of paint or their colour, have, save in such cases where the preparation has been carelessly carried out, retained the painting ground up to the present day, after exposure to weather for nearly forty years, in perfect and sound preservation.

When the mortar is perfectly dry, down to the stone or brick of the wall, it is treated to a solution of hydro-fluo-silicic acid, to remove the thin crust of crystalline carbonate of lime which has formed on the surface, and thus to open the pores. It is then soaked with two applications of potash water-glass (silicate of potassium) diluted with distilled water, and when dry the ground will be found hard, but perfectly absorbent, and ready for painting. The surface layer of mortar, or painting ground, can be prepared in various degrees of coarseness of grain to suit the artist's requirements. The more smooth and polished, however, the surface is made, the greater are the difficulties in the subsequent process of fixing, owing to the absorbent qualities of such a ground being necessarily less perfect. The ground can also be prepared in any tint or colour that may be desired, and can be applied to any suitable substance, if needed for a removable decoration. Stone, tile, slate, wire-gauze, glass, and canvas form an efficient substitute for the wall in such cases. If applied to canvas, it can in this form be fixed to wood-panels, mill-board, ceilings, &c., and admits of being rolled with perfect safety. The advantage of this to the artist is sufficiently obvious. If a ceiling, for instance, has to be decorated by this process, it can be painted with the same convenience as an ordinary picture in the studio. After it is fixed, it can be rolled up, taken to its destination, and fastened on to the ceiling, either temporarily or permanently, at the cost of very little expenditure of time or labour. Similarly (unless it were permanently fastened up), the ceiling would admit of being removed for the purpose of being cleaned.

I come now to speak of the colours used in this process. Certain pigments only are admissible, in order to insure permanence, and regard must be had to the purity of these, and to their absolute freedom from adulteration. All the colours found available for the stereo-chrome process can be employed; these are, for the most part, composed of natural earths or metallic oxides, since experience has proved that the most permanent colours are those derived from such sources. In their preparation, due account has been taken of the well-known law in optics, which teaches that colour does not lie in the substances themselves, but in the rays of light, which are divided, reflected, or absorbed by the substances in such a manner as to produce the effect of colour upon the eye.

Substances, therefore, which readily undergo change, whether by reason of their affinity to other substances with which they are brought into contact, or by the action of the light itself, which often causes molecular change, must, whenever such change takes place, lose, or modify their original colour, since, under their altered conditions, they absorb or reflect the rays of light in a different manner. Each pigment should remain chemically unaffected by the substance of the painting ground on which it is laid, and by the substance of any other pigment employed, as well as by that of the material used for fixing them. To meet this end, the colours in this process are treated beforehand with alkaline solutions (of potash or ammonia), to anticipate any change of hue which might result from the use of the alkaline liquids which form the fixative. In addition to this, they are further prepared with certain other substances, such as oxide of zinc, carbonate of baryta, felspar, powdered glass, &c., as required by the peculiar properties of each, in order to obviate any other danger of chemical change taking place.

The colours found available present a very full scale. They are thirty-eight in number, and there are several other colours which could be added if required. They consist, speaking in general terms, of four varieties of white, six of ochre, two of sienna, ten of red, two of brown umber, two of Naples yellow, two of ultramarine, five of green, three of black, and cobalt blue. Cadmium will shortly be added to them. The whites are, perhaps, in unnecessary profusion. Zinc white for its opaque qualities, and baryta white for purposes where great opacity is not desirable, would be probably found quite enough in practice. From the various nature of the properties possessed by some of the pigments, it was found that their capacity for absorbing the alkaline silicate with which they were fixed varied very greatly. There was also a marked difference in the degree of mechanical cohesive capacity which they respectively possessed. To equalise them in these respects, without which the fixing would have been a work of great difficulty and uncertainty, alumina, magnesia, and hydrate of silica were added as required. The result was, that all the colours are equally acted upon by the fixing solution, and all attain an equal degree of durability after fixing, both as regards the mechanical and chemical action of this process upon them. In the year 1878, a large mural painting was executed by this process on the exterior of the parish church at Eichelberg, near Regensburg. Before its completion, and therefore before any of the fixing solution had been applied to it, it was drenched by a heavy storm of rain. Contrary to anticipation, it was found that the painting, so far from being in any degree washed away, had held perfectly firm, and even in some places seemed to be as hard as if already fixed. Mr. Keim's explanation of this unexpected result, which he subsequently confirmed by experiments, was that a chemical cohesion had already taken place by the action of the alkali, set free in the mortar, upon the silicates in the pigments. Again, when it was determined to execute the mural paintings in the Franciscan monastery at Lechfeld, in 1879, it was desired to wash off a painting executed in this process a year previously, which had never been fixed. Neither water nor even a tolerably strong solution of acetic acid had the slightest effect upon it.

If the process appear to be somewhat of a complicated character, the reverse is the case as regards the use of this process from the artist's point of view. For him are no complications or difficulties whatever. So far from approaching in any degree the difficulties or inconveniences possessed to a greater or smaller extent by fresco-painting, or any of its more modern substitutes, this process is even far pleasanter and easier to work in than oils or water-colours. Every variety of treatment is possible, and it adapts itself to any individual style of painting. It presents perfect facility for transparent glazing as a water-colour, and for painting in body colour it even surpasses the capabilities of oil colours in its power of opaque treatment.

Moreover, the most delicate tints, when laid over darker tones, do not in the slightest degree darken over them, as they are apt to do in oils, but keep their full value perfectly. Retouching and correction can be effected with the greatest ease, and to an almost unlimited extent. The system admits also of great economy. To begin with, the pigments are by no means expensive, in spite of the labour expended on their preparation, and a very sparing use of them is sufficient to meet all possible requirements in painting, a far less amount requiring to be expended than in other processes. This is due mainly to their being ground so exceedingly fine, so that they need only be very thinly laid on; in fact, this consideration has always to be borne in mind, that the thinner the coat of painting is the greater the degree of security that can be attained by the fixing. Moreover, there need be no waste of pigment at the end of the day's work, as in oils. The palettes employed for the process, as you see by the one before you, are constructed with small pans to hold the pigments. If any paint remains after the work is finished, it can either be replaced in the bottle, or it can be kept moist in the pan with distilled water for the next day's work. Even if a considerable amount of the pigment should, by inadvertence, have been allowed to become dry, all that need be done is to grind it up again with a little distilled water, a task involving no labour.



The last stage in the process is the work of fixing. In the stereo-chrome process the fixing medium employed was silicate of potash, thoroughly saturated with silica, in combination with sufficient sodic silicate to prevent it from opalescing. The chief defect of this lay in the fact that it was often apt to produce spots upon the painting. Mr. Keim has substituted silicate of potash treated with caustic ammonia and caustic potash. The action of the carbonic acid in the atmosphere and in the water during the process leads to the formation of carbonated alkali, which makes its way to the surface, and would form, when dry, a whitish film over the painting. To obviate this danger, as well as to expedite the process of converting the silicate of potash with the basic oxides existing in the substance of the painting into silicate, the fixing solution is heated further with carbonate of ammonia. The effect of this upon silicate of potash is that silica is precipitated in a fine gelatinous form, and ammonia set free. This latter volatilises, and carbonate of potash is formed, which is easily removed by washing after the completion of the fixing.

The fixing solution is employed hot, with the advantage of obtaining a quicker and more perfect formation of silicate than was possible in the stereo-chrome process, where the solution was applied cold. The effect of the fixative as it sinks into the ground, which has already absorbed the pigments, is to convert the painting into a veritable casting, uniting with colours and ground in one hard homogeneous mass of artificial stone. The finished painting has proved itself impervious to all tests. It will admit of any acid, even in a concentrated form, being poured over it (save, of course, hydrofluoric acid). Caustic potash, also, has no effect upon it, indeed nothing can be employed with greater advantage than this for cleansing the painting when its condition requires that process. In Munich a specimen of the process was subjected to incessant tests, and put to every form of torture without intermission for two years, and I may say, in language which, if not classical, is at least familiar to English ears, it "came up smiling" after each attack, and, at the end, was as fresh and uninjured as at the beginning.

Although this process has been designed to meet the requirements of mural paintings, it is capable of application to other purposes with great advantage. For instance, it would have great merit in its durable qualities, and in the readiness with which it can be cleaned, for scene-painting; in addition to which it possesses the important advantage of being unflammable, owing to the presence of the silicate. For ordinary house-painting, it would last as long as the building itself, only needing to be scrubbed down from time to time. I need scarcely point out that it would, when used for this purpose, be an effectual protection against damp. It can also be employed for tapestry painting. It might, perhaps, be feared that such exceptional qualities could only be taken advantage of at a prohibitive cost, but this is not the case. The expense will bear favourable comparison with that of other systems, without taking into full account the lasting nature of the work executed. It only remains for me to add the testimony of a commission appointed in the spring of 1882 by the Royal Bavarian Academy, at Munich, to examine into and report on this process. The members of the commission consisted of Professors Lindenschmit, Müller, and Max, artists; Albert Schmidt and Fritz Hasselmann, architects; and Dr. Lietzenmayer, chemist. The chemical report says:—"Mineral painting guarantees with certainty that, by means of this process, mural paintings can be executed, which—presupposing a correct and conscientious treatment—are capable of the greatest and most enduring resistance to climate."

The architects conclude as follows:—"The evident hardness and capability of resistance presented by the specimens laid before us, as well as the fact that, amongst others, Professor Lindenschmit has buried one such painting a whole winter under a roof-gutter in the snow without its having received the slightest damage, leave no doubt that Mr. Keim has, through his very able method, succeeded in perfectly solving the problem of producing mural paintings indestructible by weather."

The artists on the commission sum up their report with these remarks:—"According to the foregoing opinions, Mr. Keim has undoubtedly succeeded in providing a method of monumental painting, carefully thought out, even to the smallest detail, grounded on scientific principles, and practically verified by visible facts, which is by far to be preferred to all methods of painting hitherto existent, and which, once recognised for its high value, would bring about a complete revolution in all our monumental and decorative art, and which deserves the widest publication and practical employment."

**The Royal Meteorological Society.**—At its ordinary meeting to be held, by permission of the Council of the Institution of Civil Engineers, at 25 Great George Street, Westminster, on Wednesday next, papers will be read on "The Great Storm of January 26, 1884," by Mr. William Marriott; on "The Height of the Neutral Plane of Pressure, and Depth of Monsoon Currents in India," by Prof. E. D. Archibald; and on "The Sunrises and Sunsets of November and December 1883, and January 1884," by the Hon. F. A. Rollo Russell.

## SANITARY INSPECTION BILL.

A MORE thorough supervision of the sanitary arrangements of buildings is advocated by Mr. Monckton, M.P. In a Bill introduced by him into the House of Commons, he proposes to direct every local authority to appoint sanitary inspectors for this purpose, the appointments being subject to the confirmation of the Local Government Board. To these officers are to be submitted the plans of any new building as regards the position of the drains, traps, closets, refuse receptacles, water cisterns, ventilating openings, and all other sanitary appliances. These plans are to be kept by the local authority for the purpose of future reference—an advantage to be appreciated by numerous householders who at present have no notion of the geography of their drains. In passing these plans the inspector is to be guided by certain rules. For instance, he must see that the foundation is dry and a damp-proof course provided. The drains must be of adequate size, laid with a proper fall and disconnected by a ventilating manhole or trap from the main sewer, and must have their connections properly made. There must be no direct communication of the drains with the interior of the house. The soil-pipe must be efficiently ventilated and brought down outside the building, without any outlet in proximity to any opening into the building. The closets and refuse receptacles must be in proper situations, well ventilated, of proper construction, and adapted to any scavenging arrangements that may be in force in the district. All waste pipes from sinks, &c., must discharge in the open air near, but not directly over gullies outside the house. All water cisterns must be properly constructed and conveniently situate for examination and cleaning. Openings from the external air must be provided into all rooms, and below the joists of the ground-floor for the sake of ventilation. Not only is the officer to inspect the building during its erection, but once every year he is to inspect every building existing in his district, and whatever deficiencies he notices the local authority is charged to require the owner or occupier to supply. From his decision, however, an appeal is allowed as in the Public Health Act. The expenses of the inspectors, as well as the cost of alterations to place buildings in a proper sanitary condition, including those of opening the drains for inspection, are to be paid by the owners of the property; but any damage done by the inspection is to be defrayed by the local authority. The Bill is backed by the Marquis of Stafford, Mr. H. T. Davenport, and Mr. H. H. Fowler.



### French Architectural Organisation.

SIR,—The writer of the article on "French Architectural Organisation," commenting on the paper read by Mr. White at the last meeting of the Institute, and the ensuing discussion thereon, has drawn an imaginary picture of the termination of the life of a *grand prix* architect which is very far from being correct. After noting that in the course of his career he arrives at very great honour, receives academical titles, enrolment in the *Légion d'honneur*, and membership of the Institute itself, he completes the last paragraph but one with the following phrase:—"When he dies—probably in the lonely *appartement* of a bachelor—he has speeches delivered over his grave lauding his merits to the skies of Père-la-Chaise as the designer of a single edifice and the wearer of a dozen decorations. May he rest in peace!"

In the following and last paragraph he asks "whether a prosperous architectural practitioner in England, supporting a large and happy household, will envy all this, and be anxious to surrender what he has for what he has not?"

The picture was drawn from some remarks on the career of a distinguished French architect (now dead) which I made in the discussion. It must not be supposed, however, that it is the fate of all *grand prix* men to die in the lonely *appartement* of a bachelor. I happen to know personally nine *grand prix* architects, all of whom are married men. The writer of the article seems to have forgotten that they "manage these things better in France," and a *grand prix* architect, on his return from Rome, and of the age of thirty to thirty-four, with an immediate appointment as *architecte-en-chef* of some important public building, or, if of a palace, with residence as well, and future honours in store for him, is also a *grand prix* in the matrimonial market, and his relatives undertake at once to arrange a marriage for him with some young lady provided with a suitable dowry. Every prudent French father considers it his duty to provide a dowry for his daughter. *Une belle fille avec 20,000 à 100,000 francs de dot* is not to be altogether despised, and if it doubles or trebles the nominal salary of 10,000 to 20,000 francs of the aspirant to matrimonial life, there is wherewithal to commence *ménage* at once.

With respect to the second quotation, French families, it is well known, are not *large*, though they may be *happy*, households, and the French *grand prix* architect, with one or two children



only, is able to live in a comparatively small *appartement*, and, so long as he educates the one child and provides a dowry for the other, can afford to devote much more time and personal labour to the elevation of one or more great public buildings during his lifetime (with such *temporary* assistance from *inspecteurs* and clerks as is necessary for routine work) than an English architect cares or is willing to give up when he is assisted by a regular staff of clerks and articulated pupils.

I am, yours faithfully,  
R. PHÉNÉ SPIERS.

#### Excavations at Chester.

SIR,—I notice in your issue of February 9, in a paragraph on the excavations now being made at Chester, a statement to the effect that "the antiquarians of Manchester, Liverpool, and Chester are now co-operating" in a search in the Dean's field for Roman remains.

Permit me to state that the excavations are the result of an arrangement made between the Dean and myself in August last, and the cost of the excavations so far has been borne by the Lancashire and Cheshire Antiquarian Society (headquarters Manchester) and their friends. It is much to be wished that the Chester Archaeological Society would co-operate, but so far they have held aloof.

I remain, sir, your obedient servant,  
W. THOMPSON WATKIN.

242 West Derby Road, Liverpool :  
February 12, 1884.

#### Building Risks.

SIR,—No doubt the paper by Mr. Rickman, lately read at the Institute of Surveyors, may be turned to good account by almost every one practically connected with building operations. It is a thoughtful and instructive essay, and may be taken as the outcome of a large and varied experience; and it gives outspoken expression to conscientious convictions based on a veteran's dealing with the subject-matter in hand. Young architects will do well to read it carefully and think about its every sentence, whereby they may profit through a whole lifetime. Older men it may remind of the sources of right-dealing, and at the same time throw light upon disappointments which they may never have fathomed before. Yet it is to be borne in mind that all which has been set forth in the paper is confessedly "from a surveyor's point of view," and it is just within the range of possibility that even surveyors may not be without a tinge of idiosyncrasy. Whether this class of view is absolutely right in respect of all the parties concerned in a building operation each experienced expert must settle for himself. It is to be seriously noted, however, that the foundation, as it would appear, of all Mr. Rickman's conclusions is that a building proprietor cannot relieve himself of all the responsibilities which attach to his position as such. If this be the case, no wonder that so many avoid having anything to do with bricks and mortar, and the old adage, "Fools build and wise men buy," may be fully accredited. But it may be asked—Will it be admitted all round that a building proprietor cannot either morally or legally contract a riddance of all and every risk attached to a site and a building? In the majority of cases, where the circumstances are of an ordinary character, it may be truly said that common experience negatives this proposition. Is it to be understood that an architect cannot under any circumstances assure his client with certainty that he may regard a contract sum as the full extent of his liability? If not, it might be reasonably said that no contract was ever completed within the agreed amount; but the experience of all careful architects—Mr. Rickman included—must be contrary to this. Of course there are exceptional cases where incidents transpire that could not, by any amount of foresight or forethought, be provided against. The writer remembers a contract for the construction of a gas-tank, when, after proceeding with the necessary excavations to a certain depth the workmen found themselves suddenly in the midst of an old coal-mine, and the difficulty and cost of securing a sufficient foundation and a watertight tank were enormous, yet the lawyers on both sides held that the contract was to erect the tank, and that it must be performed, and finally so it was; but, as may be imagined, not without considerable loss to the contractor. Still his legal advisers did not see their way to a maintainable claim for extras. This was an extreme case; but it was within procurable knowledge that mining operations had formerly been carried on at the site, and the question is, Whose duty was it to ascertain the facts? Did this lie with the Gas Company, their engineer, or with the contractor? The "sporting clause" set forth that the contractor was to complete the work not merely according to drawings, but absolutely. The party to the other side of the bargain naturally looked to him to do it. Even in such a case it would seem to be the duty of the engineer to uphold the contract. Mr. Rickman, by his dictum that a building proprietor cannot rid himself of all risks, notwithstanding clauses to the contrary, would mulct the proprietor for contingencies which belong to the expert. The above, as has been said, is an extreme case, but the principle of it applies generally. If it were to be admitted that a building

proprietor cannot, as is suggested, relieve himself of all risks in ordinary cases under contract with experienced experts, no one could be reasonably advised to enter upon building operations.

Yours truly,  
C. L.

#### WORKS IN PROGRESS.

**Ventilation of Public Buildings.**—Messrs. Robert Boyle & Son, of 64 Holborn Viaduct and Glasgow, have recently applied their system of ventilation to the new Prince's Theatre, Coventry Street; Grosvenor Club, Chester; Constitutional Club, Exeter; Her Majesty's Prison, Dartmoor; Her Majesty's Prison, Derby; New Fever Hospital, Birmingham; Christ's Hospital, Hertford; Military Barracks, Bombay; Local Offices, Gateshead; New Audit Offices, North-Eastern Railway, Newcastle-on-Tyne; and Post Office, Newcastle-on-Tyne.

**Stratford-on-Avon.**—The new hospital which is being erected at a cost of between 6,000*l.* and 7,000*l.*, the gift of Mr. and Miss Gibbins, of Ettington, is nearly completed, and the building will be opened early in May. A handsome clock has been fixed in the turret by the well-known firm of Messrs. Gillett & Bland, of Croydon. There are three dials, which are illuminated at night, and each one measures 4 feet in diameter.

**Messrs. Le Grand & Sutcliffe**, 100 Bunhill Row, the proprietors of the "Abyssinian" Tube Wells, will shortly commence an additional artesian tube well at Messrs. Truman, Hanbury & Buxton's Brewery, Burton-on-Trent. The same engineers have already commenced a 300 feet boring for a large brick manufactory at Pitsea, in Essex. The first portion of the work consists in sinking and steining a 100-feet shaft, from the bottom of which the boring will be continued for a further 300 feet if necessary.

**Messrs. C. Isler & Co.**, 88 Southwark Street, S.E., are completing the test borings for foundation levels for the new pier for the London, Chatham, and Dover Railway, on the foreshore at Gravesend; and recently the same firm completed a 2-inch tube well of 71 feet deep on the Saltings at Grays, and obtained at that depth a supply of fresh water.

**Messrs. Godwin & Son**, Lugwardine Works, Hereford, have just supplied tile pavements for St. Peter's Church, De Beauvoir Square, Kingsland, N., and St. Peter's Church, Ruthin; also the Callow Church, near Hereford, and St. Margaret's Church, Mountain Ash, giving in each case great satisfaction. They have also received the order for the tile pavements at the Yorkshire College, Leeds, Mr. A. Waterhouse, A.R.A., architect.

**Birmingham.**—A company has been formed to acquire possession of the Hen and Chickens Hotel property, New Street, Birmingham, and convert it into an arcade from New Street to Worcester Street, with the result of opening up a new and useful thoroughfare; which will relieve the often congested traffic at Worcester Street corner, and of utilising to the utmost the extensive premises extending back from the present hotel frontage. The New Street end of the arcade being near the terminus of several lines of omnibuses, it is expected that the traffic through the projected arcade will be considerable. The secretary is Mr. W. T. Smedley, and the architect is Mr. J. A. Cossins.

**The Proposed New Baths at Pendleton.**—The public baths for the district of Pendleton, for which the Salford Corporation have accepted tenders, are the second instalment of a series of four intended to be built by the Corporation, the first being those in Blackfriars Street, which have been in working operation for some time. The Baths Committee invited three firms of architects to submit designs in competition, and the plans of Mr. Lawrence Booth, Manchester, were selected. The contractors for the construction of the building are Messrs. Robert Neill & Sons, and for the engineering (which includes the provision of washing machinery, drying stove, slipper baths, &c.) Messrs. Thomas Bradford & Co., Crescent Works, Salford. Building operations are to be commenced forthwith, in the expectation of an early completion. The second-class plunge bath is to be 75 feet by 27 feet, and the first class 44 feet by 25 feet. There will be balconies around three sides of the former. There are twenty-five slipper baths for men and twelve for ladies. There are also vapour baths, foot baths, diving stages, dressing rooms, and all the usual conveniences. The building will be so arranged as to allow ladies to use the plunge baths. A commodious residence is to be provided for the superintendent over the ticket office and entrances.

**Stained Glass.**—Messrs. Ward & Hughes, of Frith Street, Soho Square, will shortly place a stained glass window on the north side of Selby Abbey church. Hambleton church, Selby, has recently been beautified by the erection of three stained glass windows, the gift of Mrs. Smith, of Hambleton House, Selby, which have been executed by the same firm.

**The Electric Light in the House of Commons.**—From the Easter recess to the close of the Session last autumn, the libraries and dining-rooms of the House of Commons were lighted by about



270 Edison incandescent lamps. The lighting having been entirely successful, some extension of it was deemed desirable by the First Commissioner of Works, and accordingly additional plant has been recently laid down by the Edison and Swan Company, and the total number of lamps is now increased to about 480. The machinery is located in a portion of the basement of the House adjoining the boiler-room, and consists of two  $3\frac{1}{2}$ -inch by 10-inch Armington & Sims's horizontal high-speed engines, running at about 300 revolutions per minute, the one engine driving two Edison 250-light dynamos, and the other two 150-light dynamos. The electrical arrangements admit of any circuit being operated by any dynamo, and as each pair of dynamos is run in multiple arc (that is, each dynamo of the pair performs half the work done by the two together), it will be seen that ample provision has been made against any failure of the light from accident to the engines or machines. The distribution of the lamps is as follows:—Dining-rooms, libraries, &c., 276; under galleries in the house—pilaster lamps, 32; division lobbies—table lamps 24, pendants 32, staircases 4; south entrance lobby and staircases, 13; north lobby, 8; ministerial rooms, lavatories, &c., 16; retiring-rooms, &c., 40; reporters' rooms, 21; reading-room, 12; total, 478 lamps. The existing gas fixtures have in several instances been utilised for the incandescent lamps by means of ornamental attachments in harmony with the character of the chandeliers. In other cases polished brass pendants, brackets, &c., fitted with opalescent shades have been provided. The electric wires are throughout entirely concealed from view, being either carried behind the panelling or encased in mouldings stained to the colour of the surrounding woodwork. The lamps are arranged on a considerable number of separate circuits, each capable of being lighted or extinguished by its proper switch. In a small apartment immediately under the floor of the House about twenty of these circuits converge on a switch-board, and can be controlled by the attendant who possesses the key to the switches. Each switch is surmounted by a double-pole safety fuse, and each circuit is lettered. In no part of the House will the electric light prove a greater boon than in the rooms set apart for the use of the gallery reporters, which have hitherto, owing to their contracted nature, suffered from a highly vitiated atmosphere. The whole of the work in connection with the installation of the light has been carried out under the superintendence of Mr. T. O. Belshaw, of the Edison and Swan Company, Mr. Prim supervising the arrangements on behalf of the Office of Works.

### CHURCH BUILDING AND RESTORATION.

**Badsey.**—At a meeting on Saturday last of the parishioners of Badsey, three miles from Evesham, the plans of Mr. Graham Jackson, for the complete restoration of the parish church and tower, were adopted, and a subscription list announced amounting to 950*l*. The church, which is much decayed, is partly in Early English and partly sixteenth-century style.

**Maldstone.**—At a meeting of the Dealtry Memorial Committee, plans prepared by Mr. Pearson, R.A., for the restoration of All Saints Church were considered. The scheme will involve the expenditure of a large sum of money, and it was decided that the Memorial Fund should be devoted to the restoration of the nave roof. The Rev. E. F. Dyke announced that, if the whole of the proposed work were undertaken, the Messrs. Hollingworth would contribute 2,000*l*. towards the cost. Immediately it is known what part the Ecclesiastical Commissioners will take in the restoration of the chancel, an effort will be made, entirely apart from the Memorial Fund, to raise the amount required for a suitable and complete restoration of the fabric of the church.

**Habton.**—A new church, dedicated to St. Chad, has been opened at Habton, near Malton. The cost of the new church has, in a great measure, been defrayed by a lady of the district. The building is in the Gothic style, the architect being Mr. Fowler, of Durham.

**Seascale.**—In consequence of the iron church at Seascale having been blown down during the recent storm, a public meeting has been held to determine what course should be pursued with regard to the erection of a new church at this rising watering-place. It was finally determined to procure a site for a permanent church to be built, and a church committee was appointed to collect subscriptions, make the necessary arrangements, and to select from their number a building committee.

**A Report** of the Board of Trade issued on Saturday last states that the total number of bills deposited for the session of 1884 which relate to railways, canals, tramways, and the supply of gas and water amounts to 227, against 221 of the session of 1883; the total amount of money proposed to be raised is 67,280,666*l*., against 94,342,749*l*., or a decrease in that proposed to be raised in the session of 1884, as compared with the bills of the session of 1883, of 27,062,083*l*.. They are made up in this manner:—Railways and canals, 149 bills, and proposed capital 60,968,195*l*.; tramways, 30, proposed capital 3,747,910*l*.; gas, 18, capital 590,411*l*.; water, 30, capital 1,974,150*l*.

### GENERAL.

**A Proposal** has been made to present the Bishop of Worcester with a portrait of himself, to be painted by Mr. Ogless, R.A.

**The Exhibition** of the Royal Scottish Academy at Edinburgh will be opened to the public to-day (Saturday).

**The Royal Scottish Academy**, at a general meeting held on Monday, elected Mr. William Beattie Brown, A.R.S.A., to the rank of Academician.

**An Art School** is to be erected in the town of Redditch in combination with a literary and scientific institute. Over 1,200*l*. of the 2,000*l*. required for the erection was promised at a meeting just held to promote the scheme.

**Mr. Arthur B. Plummer, A.R.I.B.A.**, of Newcastle-on-Tyne, has been appointed the architect for extensive additions which are to be made to the Lunatic Asylum at Coxlodge.

**The Prussian Landtag** have voted an extraordinary grant of 2,000,000 marks for the increase of the collections in the Royal Museums in Berlin.

**Mr. J. Earnshaw** has been commissioned to prepare designs for new parish-room at Christ Church, Bridlington Quay.

**The Marlborough Town Council** have made an order for the payment of 284*l*. to Mr. Ponting, architect, for preparing plans for building a new town hall, a project which has now been abandoned.

**Mr. John O. Scott** has received a commission to design a canopy for a recumbent figure of the late Primate, which it has been finally decided to place in the north-east transept of Canterbury Cathedral.

**Mr. Flavel**, the Mayor of Leamington, has announced his intention of presenting to that town a stained glass window for the Council Chamber of the new municipal buildings. The window will represent the Forest of Arden, with Shakespeare as the central subject.

**An Exhibition of Portraiture** is proposed to be held in Edinburgh during the present year, in accordance with a suggestion made by the donor of 10,000*l*. towards the formation of a national portrait gallery, and with a view of stimulating public interest in the proposed national gallery.

**At the Birmingham Architectural Association** on Tuesday evening, a paper was read by Mr. J. Spencer Swann on "The Influence of Literature on Art."

**The Designs** of Mr. D. Arkell, of Birmingham, have been selected in competition for the proposed Volunteer Drill Hall at Wolverhampton.

**When Planting Trees** last week around the new fort constructed outside the Porta San Lorenzo, Rome, a fine statue of Apollo, 1 metre 80 centimetres in height, was discovered, in a good state of preservation, and perfect with the exception of the right hand and the left forearm.

**Messrs. Thomas Robinson & Son, Limited**, Rochdale, have received a gold medal for their exhibits of wood-working machinery, steam engine, and boiler, at the Calcutta Exhibition.

**The Rumour** which was current last year that Clement's Inn had been sold is now confirmed, and that the quaint old Inn has been disposed of for 50,000*l*. to a private speculator.

**At the Metropolitan Board of Works** meeting on Friday in last week, the deputy-chairman stated that the Board had spent 4,600,000*l*. upon the main drainage of the metropolis, and were constructing relief lines and sewers which would cost an additional sum of 1,500,000*l*.

**The Liverpool Corporation** have authorised the issue of stock to the amount of two millions sterling, to pay debts falling due in the present year, and for the extension of public works—among the latter the purchase of "insanitary property" and the provision of improved dwellings for artisans. The city owes nearly six millions, but the revenues leave a surplus of 70,000*l*. over the annual charge of the debt.

**The Constitutional Club**, which is to be built on the vacant plot of ground adjoining the Grand Hotel, Charing Cross, is now proceeding apace, and when completed next year will be one of the most commodious and handsome club-houses in Europe. In size and splendour it will exceed that of the Carlton, containing as it will 120 bedrooms for the use of its members. The entire cost will not fall far short of 160,000*l*.

**Mr. J. P. Seddon**, in his address at the Parkes Museum of Hygiene on Tuesday, said that Dr. Angus Smith had described the air in some crowded theatres as being more foul than that in the street sewers. Theatres being highly heated acted as pumps to extract the foul gases from the drains below. The proper and only system to adopt was that of ventilation, by which an ample quantity of tempered fresh air could be forced into all parts of the buildings, with secondary provision for the extraction of foul air where it was generated. What was wanted was that managers of theatres should realise the paramount necessity for their proper and thorough ventilation, and that they should instruct their architects to have some efficient and complete system carried out.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, FEBRUARY 16, 1884.

### TENDERS, ETC.

\* \* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* \* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

### EDITORIAL NOTICES.

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Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

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### COMPETITIONS OPEN.

ABERDEEN.—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10s. 6d. to Mr. John Otto Macquene, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will receive a Premium of £50.

BLOEMFONTEIN.—Mar. 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

KNOTTON.—Feb. 21.—Plans are required for a Stone-built Workhouse for 120 inmates. Mr. E. H. Deacon, Clerk to the Guardians, Knotton, Radnorshire.

LEICESTER.—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

LONDON.—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

NEWCASTLE-ON-TYNE.—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

WIDNES.—Mar. 20.—Designs are invited for Public Offices and Town Hall. Mr. J. T. Allen, Public Offices, Widnes.

### CONTRACTS OPEN.

ATHERTON.—For Building Baptist Schools and Minister's House. Mr. J. C. Prestwich, Architect, Bond Street, Leigh.

AUCHTERMUCHTY.—Feb. 18.—For Building Dwelling-house. Mr. David Storras, Architect, Cupar-Fife.

BANBURY.—For Building Warehouse. The Plans at the Office of the Banbury Co-operative Society.

BANSTEAD.—Feb. 28.—For Building Three Additional Houses at the Cottage Home School. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

BARNSELY.—Feb. 16.—For Building House and Shop. Messrs. Dixon & Moxon, Architects, 5 Eastgate, Barnsley.

BELFAST.—Feb. 18.—For Building Two Houses, Shop, and Store. Messrs. Fraser & Son, Architects, 117 Victoria Street, Belfast.

BIRKENHEAD.—Feb. 25.—For Building Public Lavatories. Mr. T. C. Thorburn, Borough Surveyor, 35 Hamilton Square, Birkenhead.

BOURNEMOUTH.—March 1.—For Building Dwelling-house, West Hill Road. Mr. Herbert W. Dibden, Solicitor, Wimborne.

BRADFORD.—Feb. 22.—For Building School Chapel, Four Lanes End. Mr. W. Rycroft, Architect, 85 Chapel Lane, Bradford.

BRIGHTON.—Feb. 26.—For Building Four Cottages. Mr. P. C. Lockwood, C.E., Town Hall, Brighton.

BRUMBY.—Feb. 20.—For Building Cemetery Chapel, Lodge, Walls, and Entrance-gates. Messrs. Bellamy & Hardy, Architects, Broadgate, Lincoln.

CHELTENHAM.—Feb. 18.—For Building Boarding-house, Bayhill. Mr. J. Middleton, Architect, 1 Bedford Buildings, Cheltenham.

CHIPPING CAMPDEN.—Feb. 25.—For New Works at Church. Messrs. Waller, Son & Wood, Architects, 17 College Green, Gloucester.

EBBW VALE.—Feb. 16.—For Erection of Hotel and Stable Buildings. Mr. E. A. Johnson, Architect, Abergavenny.

FINCHLEY.—For Building Villa. Mr. F. D. Thomson, Architect, The Oaks, Woodside, North Finchley.

FINTRAY.—Feb. 16.—For Building Dwelling-house at Posnett. Mr. Warrack, Newmill, Fintrey.

GREAT HORTON.—Feb. 21.—For Completing Tower and Spire, St. John's Church. Messrs. Healey, Architects, Tyrrel Street, Bradford.

HALLIWELL.—For Extensive Alterations to Dean Mills. Messrs. Bird & Whittenburg, Architects, Town Hall Buildings, King Street, Manchester.

HUCKNAL TORWARD.—March 1.—For Additions to Schools. Messrs. Booker, Architects, Short Hill, Hollowstone, Nottingham.

KIRK WALL.—Feb. 18.—For Building Town Hall and Public Offices. Mr. T. S. Peace, Architect, Kirkwall.

LINCOLN.—Feb. 20.—For Enlarging Church of St. Botolph. Mr. W. Watkins, Architect, St. Edmund's Chambers, Lincoln.

LONG EATON.—Feb. 18.—For Building Ten Dwelling-houses and Shops, &c., Bridge Street; Nine Houses and Shop, King Street; Office, Princess Street; Stabling, Carriage-house, &c., Elm Avenue; and Out office and Shop, High Street. Mr. J. Sheldon, Architect, Market Place, Long Eaton.

MIDFORD.—March 4.—For Construction of Bridges at Freshford and Midford. Plans, &c., at the Railway Station, Reading.

NEWARK.—Feb. 22.—For Building Chapel. Mr. G. Sheppard, Architect, 9 Kirkgate, Newark.



NEWARK.—For Building Six Houses. Mr. G. Sheppard, Architect, 9 Kirkgate, Newark.

NOTTINGHAM.—For Building Residence, Stables, &c. Mr. G. S. Doughty, Architect, Tavistock Chambers, Nottingham.

NOTTINGHAM.—Feb. 18.—For Additions to County Court. The Secretary, H. M. Office of Works, 12 Whitehall Place, S.W.

PEEBLES.—Feb. 19.—For Building Woollen Factory. Mr. Richard Murray, C.E., 160 Hope Street, Glasgow.

RIO DE JANEIRO.—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

SAWLEY.—Feb. 18.—For Building Six Dwelling-houses and Shop, with Outbuildings, Fence Walls, &c. Mr. John Sheldon Architect, Market Place, Long Eaton.

SCARBOROUGH.—Feb. 21.—For Building Business Premises Newbro' Street. Mr. James Wilson, Architect, 12 East Parade, Leeds.

SOUTH BANK.—Feb. 25.—For Enlargement of Police-station. Mr. Walker Stead, C.E., Court House, Northallerton.

SOUTH ELMSALL.—Feb. 27.—For Building Wesleyan Church. Mr. J. Wilson, Architect, 12 East Parade, Leeds.

SOUTHEAST.—Feb. 19.—For Construction of Pier, Toll-house, &c. Mr. Cayton, Surveyor, Southeast.

STOCKSLEY.—Feb. 25.—For Rebuilding Skutterskelf Bridge. Mr. Walker Stead, C.E., Court House, Northallerton.

SUDBURY.—Feb. 21.—For Alterations and Additions to The Ryes. Mr. E. F. Bisshopp, Architect, 32 Museum Street, Ipswich.

WILSDEN.—Feb. 16.—For Alterations and Additions to Chapel. Mr. M. Whiteley, Architect, 13 Charles Street, Bingley.

WHITBY.—Feb. 25.—For Building St. Hilda's Church. Mr. R. J. Johnson, Architect, 3 Arcade, Newcastle-on-Tyne.

## TENDERS.

### BERKHAMSTED.

For Building New Premises, London and County Banking Company, Berkhamsted. Messrs. BATTERBURY & HUXLEY, Architects.

TAYLOR & GRIST, Aylesbury (accepted).

### BIRMINGHAM.

For Building a Row of Six Dwelling-houses, Priory Road, Balsall Heath, Birmingham, for Mr. Horatio Wood. Mr. OLIVER ESSEX, A.R.I.B.A., Architect, Birmingham. Quantities by the Architect.

Matthews & Son	£3,191 0 0
Robotham	2,900 0 0
Garlick	2,800 0 0
Briley	2,750 0 0
Surman & Son	2,675 0 0
Woodward	2,672 0 0
Charley	2,666 0 0
Robinson	2,666 0 0
Whitehouse & Jones	2,659 0 0
Bowen	2,639 0 0

### BLACKPOOL.

For Construction of Gasholder Tank, 134 feet diameter by 34 feet deep, Blackpool. Mr. CHEW, Engineer.

Turner	£7,000 0 0
Walsh	6,179 0 0
Hall & Whiteside	4,736 0 0
Hilton & Sons	4,598 0 0
McKnight	4,492 0 0
Clegg	4,124 0 0
Dawson	3,965 0 0
Gradwell	3,870 0 0
Fotherby & Sons	3,820 0 0
Harris & Jenkins	3,760 0 0
Leed	3,650 0 0
Christian	3,500 0 0
Fielding & Sons	3,330 0 0
Nowell	3,223 0 0
Dean	3,210 0 0
Cardwell	3,209 18 0
Ward & Brown	3,095 0 0
COOPER & TULLIS (accepted)	2,929 0 0

### BODMIN.

For Restoration of the Parish Church of St. Petrock, Bodmin. Mr. R. J. WITHERS, Architect.

SEARLE, St. Austell (accepted) £1,650 0 0

### CHISWICK.

For Making Up and Draining new Street through the Poor Land, Chiswick. Mr. G. R. STRACHAN, Surveyor.

Beadle Bros., Erith	£911 0 0
Neave, Stratford	770 0 0
Priestley & Gurney, Camden Town	760 0 0
Armstrong, Chiswick	716 16 0
Hare, Clapham	671 8 6
Pizzey, Hornsey	669 0 0
Nowell & Robson, Kensington	647 0 0
Saunders, Fulham	595 0 0
BALL & SONS, Chiswick (accepted)	588 0 0

### CHELMSFORD.

For New Stables and Fences in the Market, for the Local Board of Health. Mr. C. PRETWEK, Surveyor.

Kennell	170 5 0
Moss	158 10 0
Wood	141 8 0
FARROW (accepted)	138 0 0

### CLIFTON.

For Alt rations and Additions to Farm Buildings at Armtyage Arms, Clifton, near Brighouse, for Sir George Armtyage, Bart. Mr. R. F. ROGERSON, Architect, Brighouse.

Mortimer, Moor Side, Cleckheaton	£219 10 0
Cross & Son, Brighouse	212 10 0
Bottomley, Brighouse	199 0 0
Drake, Hartshead	169 0 0
FEARNLEY, Brighouse (accepted)	168 10 0

#### Joiners.

Bottomley, Brighouse	143 0 0
Hirst, Clifton	139 19 0
Speight, Scholes, Cleckheaton	138 9 0
Sykes & Sons, Brighouse	137 0 0
CROWTHER, Brighouse (accepted)	136 0 0

#### Plumbers.

Lawson, Brighouse	8 13 0
BROOK, Brighouse (accepted)	7 14 0

#### Plasterers.

Heponstall, Brighouse	4 12 0
Gledhill & Barraclough, Brighouse	4 10 0
SHAW, Mirfield (accepted)	4 4 0

#### Slaters.

Fearnley, Brighouse	20 15 0
Smithies, Bradford	20 10 0
SHAW, Mirfield (accepted)	11 10 0

### CROWLE.

For Taking Down old and Building new Vicarage House, for the Rev. J. Stephenson, at Crowle, near Worcester. Messrs. HENRY ROWE & SON, Architects, Worcester.

INWOOD, Malvern (accepted) £1,200 0 0

### EASTBOURNE.

For the Erection of the Town Hall and Municipal Building for the Town Council of Eastbourne, Sussex. Mr. W. TADMAN FOULKES, Architect, 103 Colmore Row, Birmingham. Quantities by Mr. William A. Phipson, Surveyor, Birmingham.

Hawes, Norwich	£38,000 0 0
Morris, East Grinstead	36,500 0 0
Perry & Co., Bow, E.	35,767 0 0
Peters, Horsham	35,591 0 0
Longley, Crawley	34,500 0 0
Avard, Maddington	34,500 0 0
Martin Wells & Co., Aldershot	34,500 0 0
Bisset & Son, Sheffield	34,050 0 0
Wren, Eastbourne	33,515 0 0
Smith & Sons, South Norwood	33,367 0 0
Everett & Son, Colchester	32,450 0 0
Bradney & Co., Wolverhampton	31,990 0 0
Fell, Leamington	31,834 0 0
Peerless, Eastbourne	30,125 0 0
Hudson, Kearsley & Co., Brighton	30,000 0 0
Foster & Dicksee, Rugby	29,999 0 0
Greenwood, Arthur Street, W.C.	29,915 0 0
Bull & Co., Southampton	29,800 0 0
Charwood Bros., East Grinstead	29,540 0 0
DORR & SONS, Eastbourne (accepted)	28,745 0 0

### FAVERSHAM.

For Building 120-Quarter Malting, with Ale Stores under, for Messrs. W. E. & J. Rigden, Faversham, being Section 1 for Works below Ground Line. Mr. RICHARD WAITE, Architect, Duffield. Quantities by the Architect.

Smith, Stratford	£1,321 0 0
Ames, Birchington	1,173 0 0
Foster & Dicksee, Rugby	1,170 0 0
Paramor & Sons, Margate	1,100 0 0
Spencer, Luton	1,097 0 0
Stiff, Dover	1,082 0 0
R. M. & H. Whiting, Faversham	1,041 0 0
Wiles, Dover	997 0 0
Welch, Dover	990 0 0
Howland Bros., Ashford	993 0 0
Cornelius, Whitstable	989 0 0
Denne, Deal	987 0 0
Battley, Old Kent Road, S.E.	979 0 0
Wallis & Clements, Maidstone	870 0 0
SHRUBSOLE, Faversham (accepted)	849 0 0

### FORRES.

For Building Coach Factory, Tyler Street, Forres. Mr. J. MILNE, Architect.

Hislop, mason	£160 0 0
Macpherson, carpenter	109 19 9
Ogilvie, slater	16 4 0
Nairn, plasterer	29 18 0
Taylor, plumber	13 18 6

### GRAVESEND.

For Alterations and Improvements to the Union Buildings, Gravesend.

Nightingale	£538 2 0
Sager	519 0 0
W. & J. Wallis	443 0 0
GOLDFINCH (accepted)	405 0 0

For Building Dwelling-house and Additions to Public Hall, Gravesend. Messrs. WADMORE & BAKER, Architects, Great St. Helens, London. Quantities not supplied.

Blake	£1,040 0 0
Wallis	1,015 0 0
Rayner	853 0 0
MARTIN (accepted)	760 0 0

### GREAT YARMOUTH.

For Wood Paving King Street, Great Yarmouth. Mr. J. W. COCKRILL, Borough Surveyor.

Hurst, Gracechurch Street, London	£1,950 0 0
Bray, Yarmouth	1,428 0 0
Improved Wood Paving Company, London	1,410 0 0
Hayward, Eastbourne	1,291 17 6
Duffey & Son, Stokes Road, London, S.E.	1,150 0 0
Cork & Beach, Yarmouth	1,110 0 0
Nudd, Yarmouth	1,067 0 0
BATCH, Norwich (accepted)	963 0 0
Surveyor's estimate	1,175 0 0

### GUERNSEY.

For Additions to the Hon. — Saumarez's House, Guernsey. Mr. NEWTON, Architect. Quantities supplied by Messrs. Palmer and Ruault.

	No. 1.	No. 2.
Foster & Dicksee	£4,744 0 0	£5,666 0 0
Bades & Harper	6,490 0 0	7,245 0 0
Bangs & Co.	7,396 0 0	7,296 0 0
Stephens & Bastow	7,578 0 0	7,160 0 0

### HASTINGS.

For Rebuilding No. 22 Castle Street, Hastings, for Mr. T. Wallis. Mr. ARTHUR WELLS, Architect, 27 Chancery Lane, W.C., and Hastings.

Avis	£440 0 0
Rodda	435 0 0
C. & G. Harman	411 16 0
White	410 0 0
HOWELL & SON (accepted)	395 0 0

For Building Gate Lodge at Old Roar, near Hastings, for the Executors of the late Mr. Geo. Clement, Mr. ARTHUR WELLS, Architect, 27 Chancery Lane, W.C., and Hastings.

KING, Hollington (accepted) £204 10 0

No competition.

### LONDON.

For Heating Apparatus, Albert Exhibition Palace, Battersea.

Braby	£2,738 0 0
Strode	2,231 0 0
Rosser & Russell	1,996 0 0

For a new Warehouse to be built in the rear of No. 362 Edgware Road, for Mr. J. J. Thomas. Mr. ROBERT J. WORLEY, Architect. Quantities by Mr. R. C. Glead.

Saunders	£1,989 0 0
Ellis & Turner	1,980 0 0
Braid	1,880 0 0
Marks	1,615 0 0
Turtle & Appleton	1,545 0 0
Green	1,497 0 0
Smith	1,493 0 0
Lawrance & Sons	1,453 3 0

For Building Additional Stables, General Road, Uxbridge Road, for the London General Omnibus Company, Limited.

Williams, Son, & Wallingham	£980 0 0
Lifford	927 0 0
Scharien & Williams	863 0 0
Scott	827 0 0
Priestley & Gurney	773 0 0
Higgs	760 0 0
Hack	749 0 0
Garrud	727 10 0
Rowell & Son	726 0 0
Richens & Mount	721 0 0
Haynes	700 0 0
Parker	649 0 0
ALDRIDGE & JENNER (accepted)	623 0 0

For Erection of Board School, Langford Road, Chelsea. Mr. E. R. ROBSON, Architect.

Shillito	£14,509 0 0
F. & F. J. Wood	13,910 0 0
Howell & Son	13,063 0 0
Johnson	12,795 0 0
Bangs & Co	12,751 0 0
Turtle & Appleton	12,748 0 0
Lathey Bros.	12,672 0 0
Smith & Sons	12,679 0 0
Kirk & Randall	12,540 0 0
Reading	12,533 0 0
Oldrey	12,527 0 0
Brass	12,416 0 0
Jerrard	12,333 0 0
Stimpson & Co.	12,180 0 0
Holloway	12,119 0 0
Sharmur	12,090 0 0
Grover	12,038 0 0
Downs	11,955 0 0
Wall	11,820 0 0

For Enlargement of Board School, Cater Street, Peckham. Mr. E. R. ROBSON, Architect.

Bangs & Co.	£4,545 0 0
Grover	4,529 0 0
Brass	4,518 0 0
F. & F. J. Wood	4,508 0 0
Kirk & Randall	4,499 0 0
Wall Bros.	4,473 0 0
Jerrard	4,438 0 0
Oldrey	4,410 0 0
Larke & Son	4,395 0 0
Johnson	4,305 0 0
Stimpson & Co.	4,290 0 0
Downs	4,268 0 0
Howell & Son	4,260 0 0
Holloway	4,221 0 0
Goodman	4,219 0 0
Smith & Sons	4,210 0 0
Holloway Bros.	3,942 0 0

For Covered Playgrounds to Schools, for the London School Board.

	Manchester Street.
Riley Bros.	£206 0 0
Lowes	169 0 0
Holden & Co.	140 0 0

	James Street, Buckingham Gate.
Shepherd	346 7 0
Braby & Co.	213 4 6
Holden & Co.	190 0 6



LONDON—continued.

For the Erection of Fire Escape Station at the Fulham Road Workhouse, for the Guardians of the Poor of the St. George's Union. Mr. H. SAXON SNELL, Architect.  
Batchelder . . . . . £284 0 0  
Wall . . . . . 258 0 0  
Bamford . . . . . 240 0 0

For the Erection of an Iron Bridge between Men's and Women's Dormitories of the Fulham Road Workhouse, for the Guardians of the Poor of the St. George's Union. Mr. H. SAXON SNELL, Architect.

Batchelder . . . . . £236 0 0  
Fraser & Co. . . . . 195 0 0  
Toms . . . . . 185 0 0  
Jukes, Coulson, Stokes & Co. . . . . 175 0 0  
Wall . . . . . 166 0 0  
Benham & Sons . . . . . 148 0 0  
Bamford . . . . . 150 0 0  
May Bros. . . . . 136 0 0  
POTTER & SONS (accepted) . . . . . 130 0 0

For Alterations and Additions to the Canterbury Theatre of Varieties, Westminster Bridge Road, S.E. Mr. FRANK MATCHAM, Architect, Rugby Chambers, Bedford Row, W.C. Quantities by Mr. F. Thomson.

Dove Bros. . . . . £2,105 0 0  
Patman & Fotheringham . . . . . 2,028 0 0  
Wall Bros. . . . . 2,025 0 0  
Bangs & Co. . . . . 1,982 0 0  
Patrick & Son . . . . . 1,969 0 0  
Toms . . . . . 1,878 0 0  
Shurmer . . . . . 1,710 0 0  
Ford & Everett . . . . . 1,685 0 0

MARKET HARBOUROUGH.

For Building a House in Patrick Street, Market Harborough. Mr. J. W. WITTS, C.E., Architect. Quantities not supplied.

Jarman, Little Bowden . . . . . £284 5 0  
Main & Dexter, Market Harborough . . . . . 270 0 0  
C. & W. Palmer, Market Harborough . . . . . 260 0 0  
Smith, Braybrook . . . . . 240 0 0  
JENNINGS, Market Harborough (accepted) . . . . . 202 2 0

MIDDLESBROUGH.

For Construction of Hury Reservoir (Contract No. 3), for the Stockton and Middlesbrough Corporations Water Board. Mr. MANSERGH, Engineer.

Stevenson, Eekington . . . . . £152,385 8 2  
Simpson, Preston . . . . . 143,567 16 3  
Whitaker Bros., Leeds . . . . . 135,209 8 1  
SCOTT & Co., Newcastle (accepted) . . . . . 112,653 7 9  
Crabtree Bros., Oxenhope . . . . . 110,201 5 10  
S. & W. Pattinson, Ruskington . . . . . 100,035 5 2  
Johnson & Son, Middlesbrough . . . . . 98,715 6 8  
Pearson & Son, Bradford . . . . . 98,387 1 3  
Kellett & Bentley, London . . . . . 98,250 0 0  
Schofield, Dewsbury . . . . . 97,157 7 6  
Engineer's estimate . . . . . 119,860 8 7

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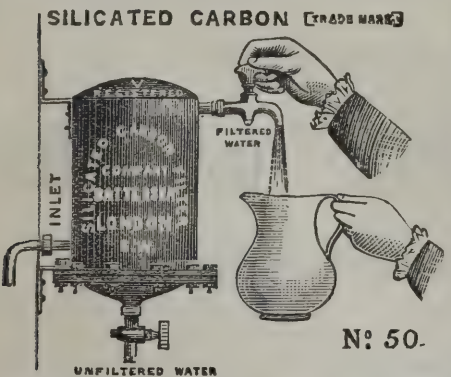
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NEWCASTLE-UNDER-LYME.

For the Erection of Post Office, Newcastle-under-Lyme.  
CORK & DOWNING, Chesterton (accepted). £1,494 0 0  
Eight tenders were received for the work.

NEWBURN-ON-TYNE.

For Building Working Men's Club, Newburn-on-Tyne.  
Messrs. LAMB & ARMSTRONG, Architects. Quantities  
by Mr. GEO. CONNELL.  
ATKINSON, Blaydon-on-Tyne . . . . . £1,915 10 0

OLDHAM.

For Building Dwelling-houses and Shops, Ashton Road,  
Oldham. Mr. ALEXANDER BANKS, Architect.

Accepted Tenders.  
Stephenson, brickwork and excavating.  
Booth, joiner.  
Bebbington, stonework and flagging.  
Jackson, slater.  
Lodge, plastering.  
Bates, plumbing, glazing, and painting.

PENDLETON.

For Erection of Baths at Pendleton, for the Salford Corpo-  
ration. Mr. LAWRENCE BOOTH, Architect.  
NEILL & SON (accepted) . . . . . £5,414 0 0

Engineering Work.  
BRADFORD & Co. (accepted) . . . . . 1,046 10 0

PETERBOROUGH.

For 4,000 cubic yards of Excavation, in Trenches, for  
Water Mains. Mr. W. MATTHEWS, C.E., Borough  
Engineer, Peterborough.

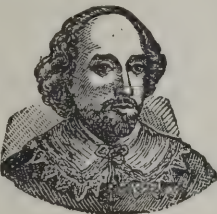
Neal . . . . . £366 13 4  
Dudley . . . . . 266 13 4  
Williams . . . . . 250 0 0  
Mussion . . . . . 200 0 0  
Stocks & Lehair . . . . . 200 0 0  
Rippon . . . . . 191 13 4  
Rimes . . . . . 166 13 4  
Sumner . . . . . 108 6 8  
Stiles . . . . . 108 6 8  
Allen . . . . . 108 6 8  
Buckle & Co. . . . . 100 0 0  
HILL (accepted) . . . . . 66 0 0

READING.

For Building Board Schools for the Reading and Early  
School Board. Messrs. MORRIS & STALLWOOD,  
Architects.  
Wicks, Reading . . . . . £4,710 0 0  
Dover, Oxford and London . . . . . 4,250 0 0  
Bottrell, Reading . . . . . 3,627 0 0  
Architect's Estimate . . . . . 4,314 4 5

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house, Surrey. Mr. EDW. MAYNARD, Architect.  
Quantities supplied.

Kent Bros. . . . . £5,780 17 11  
Magee & Co. . . . . 5,149 13 6  
Lucas & Son . . . . . 4,845 0 0  
Longley . . . . . 4,777 0 0  
Sweet & Loder . . . . . 4,767 0 0  
Oldridge & Sons . . . . . 4,736 10 0  
Carless and Co. . . . . 4,653 0 0  
Jarvis . . . . . 4,648 0 0  
J. & W. Hickinbotham . . . . . 4,575 0 0  
Maton . . . . . 4,500 0 0  
Priestly & Gurney . . . . . 4,400 0 0  
D. & A. Brown . . . . . 4,339 0 0  
HOWELL & SON (accepted) . . . . . 4,309 0 0

SALISBURY.

For Taking Down Buildings and Erection of Six Police  
Cells, Salisbury. Mr. JOHN C. BOTHAMS, M.I.C.E., City  
Engineer.  
Tryhorn . . . . . £507 10 0

SMETHWICK.

For Building Hospital for Infectious Diseases, Smethwick.  
HARLEY & SON (accepted) . . . . . £1,550 0 0

SOUTHALL.

For the Erection of Fire Escape Staircase at Southall  
Schools, for the Guardians of the Poor of the Parish  
of St. Marylebone. Messrs. H. SAXON SNELL & SON,  
Architects.

Bamford . . . . . £330 0 0  
Woodbridge . . . . . 298 0 0  
Wall Bros. . . . . 249 0 0  
Gibson . . . . . 235 0 0

STRETTFORD.

For Laying out Cemetery, &c. Stretford.  
NAYLOR (accepted) . . . . . £2,250 0 0

THWING.

For the Erection of Board School, Thwring, East York-  
shire. Mr. J. EARNshaw, Architect, Wellington Road,  
Bridlington Quay.

Mallory, Kilham . . . . . £634 12 0  
Leeson, Bridlington Quay . . . . . 619 0 0  
Eastman, Kilham . . . . . 613 0 0  
Mainprize, Bridlington Quay . . . . . 585 15 0  
Spanton, Nafferton . . . . . 565 0 0  
Fell, Scarborough . . . . . 561 0 0  
Smith, Scarborough . . . . . 555 0 0  
Gage, Driffield . . . . . 549 15 0  
Gray, Bridlington Quay . . . . . 546 0 0  
RENNARD, Bridlington Quay (accepted) . . . . . 499 0 0

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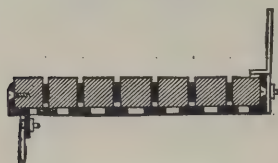
# LINDSAY'S

## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

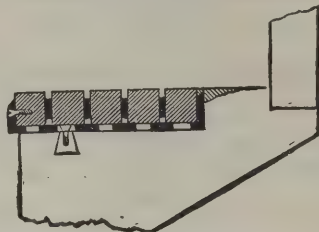
### FOR EVERY DESCRIPTION OF STAIRCASE.

THIS Patent is an improvement on the well-known wooden block construction, and its speciality is that the wooden blocks in each Tread can be removed and transposed so many times that it is almost indestructible besides being noiseless.

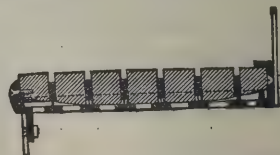
No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.



In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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# The Architect.

## LONDON GROUND RENTS.



THE subject selected for the Cantor Lectures this year at the Society of Arts is one of perennial importance, and the lecturer is a gentleman who can always secure the attention of a popular audience. Mr. R. W. EDIS, F.S.A., delivered the first discourse of three upon "The Building of London Houses" at the well-known hall in the Adelphi, on Monday evening, and dealt with their "arrangements, aspect, and design." We need scarcely say that there were a good many questions touched upon in which the general public, as distinguished from the building world, might fairly be expected to exhibit an appreciative interest; and this expectation was fully realised.

At an early stage of his lecture, Mr. EDIS, with his accustomed energy, fell foul of an abuse—as most people think it to be, and as his audience unmistakably did—which is worthy of being more thoroughly discussed than it usually has been, namely, the domination of "ground landlords" over their so-called tenants. It is no stretch of language to designate this kind of landlordism, whatever it may be in theory, as in practice a mere survival of the unfittest from the times of mediæval feudalism. Any stick, they say, is good enough to beat a dog with; and any excuse or affectation or shallow pretence is good enough to be made the basis of that personal proprietorial ascendancy which human nature so dearly loves on one side of the hedge, and so bitterly hates on the other. How long it is to last we do not pretend to say, but we live in an age in which, almost within sight of St. Paul's, it is lawful for a squire to let a few acres of pleasant land to an unsuspecting "cockney" whereon he may spend his money freely, and then to "eat him up," as poor CETEWAYO would have said, although not with soldiery with vermin for "sport," as resolutely as if he paid no rent or taxes or tithes, but were a squatter on the waste without leave or license. So also we need not be at all surprised when we find the same squire, or his cousin-german, happening to be the inheritor of some of the soil of London town, half a century ago his ancestor's garden or paddock, so possessed with a sense of his duty to his order that he looks upon the "tenants," who have built their houses upon his "estate," costing him not a penny, but making him rich with their ground rents, as in reality retainers rather than customers, whose duty therefore is, to pay of course, but much more to obey. The leasehold system of tenure, Mr. EDIS very truly says, is carried a great deal too far in London. To bring the case into the form of half a dozen words, he would deal with it upon something like the principle of the Irish Land Act. Every London ground-tenant, he says, ought to have by law the right to redeem his house by paying off the ground landlord at a reasonable price: and it can scarcely be doubted that the equity of the idea will commend itself to every unsophisticated mind.

When it is remembered (although we do not by any means desire to be either before the age or behind it) that the landed property of every man in England, when beyond his own power of protection, is protected for his enjoyment by the power of the community, it surely follows that in great towns, where the value of land is so entirely an artificial product of public enterprise, the conditions of its tenure ought to be adjusted to this artificiality. In other words, when a range of London houses, accessible from a thoroughfare maintained as public property, has been wholly built by the public individually for their own use and disposal, why should the owner of the ground, besides receiving the "unearned increment" which a ground rent so very peculiarly and liberally represents, claim the restoration of his land at the end of a certain term of years, *with the houses upon it*, and those houses every one put especially into repair for his particular benefit? And why, again, upon the strength of this arrangement so difficult to be accounted for, should the land-owner throughout the intervening time assert himself as owner of the whole property and lord and master of the occupants?

In law, of course, the answer is plain. Such is the contract. In valuation the answer is almost equally plain. Looked at from the date of commencement, the reversion at the then remote date of surrender is of so small a proportional value as to be not worth the tenant's keeping, and only worth the landlord's reserving because in this country landlordship is a permanent institution and tenantry a transitory one. But in spite of both law and valuation, it cannot but be seen that there is a grave practical inconvenience involved, and that indeed the benefit to the landlord class, whatever it may be, is secured at a great waste to the people at large, in respect of that freedom to do what they please with their own which, in house property, is of more palpable importance than in almost any other description of capital. The mere recognition of landlordship, and the conditions for arbitrary consent, are simply prohibitive to a great degree of that progression with the times which is the very basis of commercial prosperity, that free trade which in building property can no more be judiciously tampered with than in any other goods. Mr. EDIS, and many others besides, would correct the evil by this very easy and equitable remedy—that the property of the ground owner shall be his *rent* and not his *land*, and that the house owner may redeem this at his pleasure.

## EXHIBITION OF THE SCOTTISH ACADEMY.

THE interest with which the annual exhibitions of the Scottish Academy are looked forward to in Edinburgh is again justified by the high character of many of the works on view. Some of the best, it is true, are not now seen in public for the first time; indeed, it is an agreeable feature of these exhibitions that pictures which have recently drawn the public attention elsewhere are readily accepted in a small number for the benefit no less of the rising generation of Scottish students than of the community at large. Those who are already familiar with such pictures as MILLAIS's portrait of HOOK or PETTIE's *Monmouth prostrate before James II.* may, if they care, pass on to others; meantime, the many to whom these and some other pictures are still new will rejoice in their opportunity. HERKOMER's portrait of FORBES, "the correspondent," hangs staringly among its neighbours, as it did in London, and is a source of considerable attraction. His drawing of RUSKIN does not gain by being seen repeatedly. ORCHARDSON contributes only a small picture of two nuns, drawn in profile side by side, as if they were passing along a cloister, severe and simple in their demeanour and white costume. All that firmness of drawing, explicitness of modelling, and careful colouring can do is done to carry out the finely simple conception. Curiously, PETTIE also contributes a somewhat kindred subject in his portrait of *A Westminster Scholar*, drawn in profile on a small scale, and presenting a three-quarter length. For the Dutch modelling conspicuous in his *James II.* we have here necessarily the softness of a youthful face, yet it is a type of youth which lends itself well to his forcible manner. His *Young Laird*, on the other hand, is a picture in the full sense, duly combining open air and human nature with a simple incident instructive of the manners of a past age. ALMA TADEMA sends two small classic subjects—a *Torch Dance* and *In the Tepidarium*—the latter representing a Roman lady (*i.e.*, an English model), recumbent and nude, in the full enjoyment of the warmth of the tepidarium, and surrounded by luxurious objects of rich colour. The *Torch Dance* is the more attractive of the two, more original in conception, and more completely a true picture. Mr. JAMES ARCHER has a large canvas of *Peter the Hermit Preaching the First Crusade*. It is a work of great ambition, abounding in technical skill and judgment; but, on the whole, too much in the manner of Sir F. LEIGHTON, and with too little of original inspiration.

Of the painters resident still in Edinburgh Mr. GEORGE HAY seems to have passed under the same influence as that which partly shaped the style of ORCHARDSON in the matter of drawing, colour, and choice of subjects illustrating the more agreeable manners of old times. But though his outlines and modelling are firm and decisive and his colouring picturesque, yet he can hardly be said to be completely master of his task in the present exhibition. In his group of old Jacobite gentlemen toasting the king "o'er the water," there is more awkwardness in the attitudes than is necessary; at all events there is enough to render the figures ungainly. This applies also to his *Escaped*, and there is the more unpleasant because of the



attractiveness of the central figure of the richly-clad leader, who arrives within the house in time to find the person he seeks escaped. Between this central figure and his attendants in the background there is surely more disparity of scale and finish than was necessary to throw him well forward in the eyes of the spectator. Sir W. FETTES DOUGLAS is this year seen to advantage in his two very characteristic pictures of *Hudibras* and *Ralph Visiting the Astrologer*, and the *Antiquary Entertaining Lovel* in his study with an account of how he came by a rare volume. The room is of course strewn with old books in fine bindings and other curious objects. Pleasant humour at the expense of an amiable folly, as in this case, demands a peculiar talent, and it may be said that this painter has seldom surpassed the workmanship here. He has not equalled it in the other picture of the *Astrologer*, though there also his talent is at home to a considerable extent among the jars, phials, globes, books, and antique furniture of a capricious taste. ALEXANDER FRASER has made a limited experiment of a not altogether different kind in his *Queen Mary's Room in Holyrood*; but though he has brought to the task a broader treatment, he has nevertheless shown that in such interiors it is not always breadth that tells best. Fortunately he has sent also several landscapes characterised by his usual poetic feeling and mastery of simple open air scenes, where the face of nature is bright and the traces of men more or less humble, as for example in his *Canty Bay and the Bass*. Much honoured also among the landscape painters is SMART, among whose six pictures may be mentioned his *Pass of Brander* and his *Afternoon Clouds in Glen Dochart*, the latter lovely and tender. Mr. MCKAY's *Spring Day on Ancrum Common* tastes delightfully of the gorse in bloom and the sun warm, while yet the air comes clear and crisp from the hills with their lingering patches of snow. The sudden warmth of spring is finely rendered, and is driven home, so to speak, by the tinker recumbent in the foreground, while his horse, unyoked, wanders on the common. Mr. G. W. JOHNSTONE's *Yon Burnside* is rich in fine feeling, though the effect is not quite so instantaneous as could be expected, perhaps owing to the marked contrast between the seared wintry trees in the upper part of the picture and the tender green of early spring with its few rather primroses in the lower part of it. DAVID MURRAY, always a generous contributor, sends among other landscapes a bold experiment in his *Haymaking in the Scottish Fens, Lochwinnoch*, with lurid light reflected on the clouds and across the watery fields. It is an unnatural effect, and the picture, however clever, has an artificial aspect, which in the circumstances could hardly be avoided. McTAGGART, as usual, is represented by several examples of his fine resources of colour and his contempt for drawing, unless, indeed, in his portrait of R. B. FINLAY, Q.C., where something of the kind could not well be dispensed with. His drawing of *After the Storm* is really annoying in its neglect of form, but it is more pardonable there than in his *May Morning*, a subject which, as he conceives it, really demands a considerable sense of form. LAWTON WINGATE sends a very good *Orchard in Blossom*; but his best work of the year is, we think, his *Loading Hay*, in which, apart from the style of the whole composition, the horse is painted with the touch of a master. Indeed, the whole feeling of this picture is poetic and refined to a degree worthy of the high technical skill.

HUGH CAMERON enjoys a position almost, if not entirely, unique among the Scottish painters of simple domestic scenes in more or less humble interiors. It would be hard to imagine anything more poetic or perfect of its kind than his *Mother's Kiss*, or, better still, his *Trusted*, in which a young mother, in her plain cottage room, entrusts with grave injunctions her infant to the arms of a little girl, whose pride in the undertaking is as manifest as the anxiety of the mother. The touching simplicity of the scene has been met by a rare excellence in the treatment. From a higher class of life is his *Grandmother* amusing an infant on her knee. It also is a most welcome production of this gifted artist. Among the works of the rising generation who have taken so far to simple indoor subjects, not a few are of decided promise. We may mention, for instance, Miss ALICE GRAY's *Handloom Weaver*, in which the subject is very skilfully conceived and well rendered. The interior with a *Woman Spinning* is considerably less talented.

In portraiture the exhibition is marked by excellence in some of its examples, and by strong defects in others. Mr. IRVINE, always a good portrait painter, is particularly fortunate

in his *Mrs. Halley*, than whom he could not readily have found a better subject for his skill. It is a work of great beauty and excellence. Among the younger men who have taken to portraiture, Mr. MACBETH-RAEBURN has produced a very fair picture in his portrait of a young girl, richly clad, and sitting on the floor of a finely carpeted room, surrounded with red roses and other accessories of colour, carefully chosen to heighten the desired effect. It is a promising piece of work. C. KAY ROBERTSON is successful also in the portrait of *Mrs. Maitland Mackgill Crichton*.

Sculpture in Scotland, as elsewhere, is now mainly a matter of portraiture; nor is it even a great matter as such. As a rule, the statues and busts which adorn public places are arranged for by committees, who, even when they have a fair choice of models, generally choose not the best. The sculptor who would succeed must address himself to the easily-recognised class from which such committees are formed. From the present exhibition it is apparent that the Paisley committee charged with getting a statue of the local poet TANNAHILL had the choice of at least two models—the one of heroic size, but with no artistic claims; the other a small model, but full of refined and careful work, by a Mr. McBRIDE. They, of course, chose the former, and the town of Paisley, like many another town, will have its statue to be jeered at. We do not say that the unsuccessful model by Mr. McBRIDE is everything that could be desired, but it is at least a conscientious work of art. He is one of those who struggle towards an ideal aim in sculpture, and, if he is not always successful, the fault seems to lie in his too great devotion to refinement. He would do well to throw this aside for a little, and try wider and broader conceptions—in short, to follow the example of G. A. LAWSON, whose *Girl with Tortoise* is placed beside and forms a marked contrast to McBRIDE's *Girl listening to the Murmur of a Shell*.

#### MINOR EXHIBITIONS.

THE Water-Colour Exhibition opened at the Dudley Gallery this week by the Art Society now in possession is a decided improvement on that of last year. Many members of the Council have done well for its success. Mr. GEORGE FRIPP lends one or two of his inimitable little English landscapes, hayfields, and the like; Mr. HERBERT MARSHALL contributes a spirited study among the shipping on the Thames, *Foreshore at Blackfriars*, with St. Paul's dome soaring silvery in the distance, an admirable drawing, full of masterly outline and harmonious relations of colour; Mr. WALTER SEVERN is more interesting than usual in his ambitious Alpine views; Mr. BRETT, A.R.A., sends a gem-like study of serpentine rock and green sea at Kynance. Distinguished among subscribing members is Mr. WALTER LANGLEY, of whose three contributions a group entitled *The Old Story*, a weather-beaten tar reading the newspaper to his daughter, whose thoughts are far away from him and from her net-mending, gives scope to the artist for his strong study of character and clever technique, also for unaccustomed beauty in the girl's expressive and rich-tinted face. The background of rough wall and timbers is careless, and mars the completion of the picture by awkward obtuseness. Certain little pastorals thrown off with playful blottesque touch in the Impressionist manner by G. CAFFIERI are full of suggestive charm. Mr. EDWIN ELLIS has been allotted the head of the room for his large landscape *In the Fold*, which has the depth and splendour of oil and an attractive largeness of manner, qualities that may counterbalance the artificial compromise between natural and conventional Poussin-like colour.

The galleries in Conduit Street are filled with pictures in oil, water-colour, and black and white, with some sculpture—the second exhibition of the so-called Nineteenth Century Art Society. There is nothing remarkable about this enterprise, save the admixture of palpably juvenile efforts with more mature performance. Several names which we had marked for promise in landscape art at the Dudley Gallery reappear in the catalogue of this exhibition, among them GEORGE MARKS, W. H. WHEELER, A. KINSLEY, AYERST INGRAM. One of the best studies by "rising artists" is an interior after the vein of old BILLY HUNT, a loft with a rustic lad chewing a hunch of bread, *At Dinner-time*, by Mr. H. S. TUKE. Many small panels and groups by Mr. GEORGE TINWORTH are among the sculpture exhibits.



Mr. POWNOLL WILLIAMS attracts lovers of the Mediterranean coast by his third series of drawings shown at Messrs. McLEAN'S rooms. The artist's brush is ready to a fault, there is just a touch of impudence in his offhand manner. But it were ungrateful to quarrel with style that can convey an impression of place and time so characteristic and poetic as we find in many of these sketches and studies about Alassio and Mentone, on Como Lake and in Venice. Mr. WILLIAMS'S colour is singularly sonorous and delightful, whether in splendid flush or evanescent grays, and his drawings even seem to quiver with light. Although he uses body colour for effects not to be got without it, much of the vivid depth of his tone is attained by skilful washes. As an example of brilliance may be named the study of *Sunset*, numbered 53 among the Venetian studies. For delicacy the work about Alassio is the best, notably *Old Fort at Laigueglia* and *Ruined Church of Sta. Croce and Roman Way—Evening*.

It is difficult to bring grave criticism to bear on an exhibition of architectural subjects such as that opened at Messrs. DOWDESWELL'S, in Bond Street, of work by Mr. WYKE BAYLISS. Here are oil pictures and water-colour studies, many on large scale, of some of the most famous and beautiful church interiors in the world; laborious, not wholly unimpressive, but yet, if taken from the point of view of the professional architect or of the amateur of architectural beauty, unsatisfactory and incomplete. Mr. BAYLISS is not correct enough to satisfy the one or poetic enough to please the other. The limner is a writer on art and a thoughtful one, and perhaps he has too many "notions" as JONATHAN says, for a reliable painter. Frankly, though admiring the ambition with which he has essayed to reproduce the glorious choirs and aisles of Chartres, of Coutances, of St. Rémy, of picturesque Caudebec, and elegant Eyreux, our admiration stops short. There is monotony in the artist's variety; we weary of his palette and find artifice in his arrangement; his masonry lacks solidity, and we crave for precision in his detail. Nevertheless there is indeed here honest attempt to reproduce faithfully an impression of the grandeur and richness of many a revered pile; and to judge by the criticisms we heard on the day of the private view, and by the fact that a large number of the pictures are on loan from their owners, Mr. WYKE BAYLISS is not without appreciative response to his unmistakably earnest efforts.

### THE COMMON SENSE OF LONDON HOUSES.

MR. EDIS, in his first Cantor lecture, to which we have already referred, dwelt strongly upon the term "common sense," as suggestive of a condition of things in respect of the design of London houses which, if only negatively, is at present much to be desired. For instance, the access of sunshine ought to be systematically provided for, instead of being left to accident to be thrown into utter confusion. Brickwork ought to be frankly accepted as the natural material of the town, and a better material than stone for all domestic and non-monumental purposes. Terra-cotta ought to be cultivated as a legitimate refinement upon brick, easily dealt with, inexpensive, and highly effective artistically. Glazed brickwork ought to be also made use of, if only as a self-cleansing surface in an atmosphere overloaded with defilement. "Italian palaces and Gothic fortresses" ought to be equally refused admission into modern London streets; both being equally inappropriate, inconvenient, and ungraceful in the circumstances of London life. Our own Elizabethan or Stuart modes ought to be rather studied, as likely to turn out better for our own modern requirements than any styles of antique times, belonging to other lands, other climates, and other peoples. Our houses ought to tell the story on their faces plainly of English convenience and English comfort within; such comfort and convenience being the sole primary considerations, and the outside grace the mere pleasant superficiality which in these days any sufficiently well-bred architect is able to devise, without difficulty and without fuss. Parisian façades, again, in "linked sweetness long drawn out," however gracious in their proper place, are scarcely suitable for London streets and London clouds. The picturesque ought rather to be aimed at, as a rule, for English town effects—the picturesque allied to common sense, regulated and restrained by it, and enhanced by it. Our ironwork, as typified in the cast railings of areas and balconies

and the melancholy patterns of lamp-posts, ought to be converted—the administration of a very moderate dose of common sense would do it—into equally easily obtainable and infinitely more enjoyable efforts, however humble, in inexpensive hampered work. It is in such small matters, says Mr. EDIS very sensibly, that the taste of a *people* is shown. Good design, he says again, costs nothing; and indeed it certainly need cost no more than a little exercise of brain power, itself the most pleasant, by the way, of all exercise, and the most surely its own abiding reward. There may be nothing very new in all this, but it is very true, and cannot be too often repeated.

Mr. EDIS lays a great deal of that quality in London housebuilding affairs which is not in harmony with common sense at the door of "Bumbledom." As a rule, all vestries, local boards, and other municipal authorities, together with the private agencies of ground landlords, he would sweep away into limbo. They do not, he thinks, answer; or, rather, they answer a great deal too well in the wrong way. Without them London might be delightful; with them it is, as far as they can make it so, delightless. By the way, might it not be well to give a hint about this to Sir WILLIAM HARCOURT and Sir CHARLES DILKE just now? We cannot conscientiously recommend Mr. President HORACE JONES to tackle the Government any more upon such points; but is there no one at all who could try a hand in the interest of grace when new municipal reforms are so much in the air?

### THE INCIDENCE OF BUILDING RISKS.

(Continued from page 105.)

ALL risks incidental to building works appertain to the building owner, and he must retain them until he can find someone who is willing, "for a consideration," to take some of these risks. This someone is usually a builder, whose business it is to build, taking more or less risks in building. He should be an expert in building risks, and know how to calculate their value, which the building owner rarely does. Where is the hardship to the builder in making a contract with a building owner to do a defined work for a defined payment, taking some of the risks attaching to the building owner for just so much as he (the builder) considers them to be worth? Builders do not want dry-nursing or petting; they do not want to be told that they cannot make bread by building contracts because of their risks and contingencies, but may make their fortunes if they will turn to engineering contracts, which of course have no risks or contingencies attaching to them. Out of the frying-pan into the fire with a vengeance. If good people who talk so kindly about engineering contracts would but read the general conditions attached to any contract for making a railway, they would surely throw up their hands in wild amazement, exclaiming, "Can such things be?" Builders know very well that to eliminate risk is to eliminate profit. Every trade has its risks, some more, some less, and why should the building trade be exempt? Read the general conditions for building contracts issued by the Central Association of Master Builders of London (on the lines of which most of the contracts for important buildings are now based), and say where is the injustice to the builder to be found in them. There appears to be plenty of "bowels of compassion" for builders who are usually calculating, shrewd, hard-headed men of business, but very few for the building owner, who is the veritable "milch cow" of the business. Of the "Five Alls" of the old-fashioned tavern sign, his "all" would be "I pay for all." His risks are many, and cannot be transferred as to the most onerous of them. A great risk is the probability of the building turning out unsatisfactory or unremunerative. He thought he knew what he wanted; but, when the building is finished, he finds it is something quite different. He thought he should realise a fair percentage on the investment, and he finds the supply exceeds the demand, and the property either remains unlet, or has to be let on unremunerative terms. He employs an architect—another risk. The architect may fail to understand his instructions, and the employer may fail to find this out until too late. The architect may mislead his client as to cost. Of all the sins which architects commit professionally, this is probably the one most often committed. From ignorance, or from vanity, from refusing to cut the coat according to the cloth, architects are constantly understating the probable cost of works to their



clients. And then comes the miserable process of cutting down the estimates, a process in which the building is usually spoiled, and the employer may think himself fortunate if for every pound reduced he has not sacrificed at least twenty-five shillings' worth of efficient work. There is the risk of the dreaded "extras." In a well-considered contract these ought scarcely to be found, but a prudent architect will always have a small percentage reserved to cover the incidentals which always crop up towards the finish of a building. If the employer will interfere with the works by variations after the contract has been made, he must take the responsibility of so doing. This removes the risk. It is a deliberate undoing of the safeguards which had been prepared for him. The beginning of variations is the beginning of peril. If, unknown to his client, an architect introduces variations into a building, the employer must pay, for the architect is his agent; but surely all the cost of "such" variations and of all the expenses consequent thereon ought ultimately to fall on the architect if the employer suffers injury thereby. As between builder and employer, the employer must pay, but as between architect and employer what should happen? An architect ought not to spend or risk his employer's money without the direct sanction of his employer. If he does, such doing should be considered *ultra vires*, and the architect should be liable to the employer for the whole loss sustained. It is out of these mischievous variations that most disputes arise. In carrying out a contract for defined work for a defined sum without variations, serious difficulties can rarely arise, but introduce variations, and it is as "the beginning of strife." And litigation once begun introduces other and unknown risks to the employer. He had left all the details of the specification to his architect; he did not pretend to understand the technical terms; but as a man of business he read and thought he understood the "general conditions" of the contract; he thought they were fair and that they would be binding on both parties. He sometimes trusted to a broken reed. Disputes came, and "all matters in difference" were referred to an arbitrator. If to a barrister, he was pretty sure of having the general principles of the contract maintained, while the technical terms of the building trade were hopelessly floundered in by the legal gentlemen on the one side or the other. If to an architect or surveyor, or to an architect and surveyor, other risks may arise. An attempt would probably be made to upset the contract, general conditions and all, and the "architect, &c." arbitrator, if sufficiently "battered," sometimes falls into the trap. He considers he could have drawn up far better general conditions than those of the contract; indeed, he does not think the builder should be bound by such general conditions, and all matters in difference being referred to him, he simply ignores conditions and contract, and proceeds to deal with the builder's claims (always models of rectitude and setting forth both sides of the account with strict impartiality) on the basis of fairness "as it appears to him." From such arbitrators may building owners in future be delivered. Risk to a building owner from "the surveyor" employed is comparatively slight. There is "incompetence" to be guarded against; but given an intelligent practical surveyor, and he will usually be found a great safeguard to employer, architect, and builder. He should be this, and can be; but he must be a "free" agent, and willing to use his freedom. Risk from the builder—this ought scarcely to be. There are so many good builders, why risk the employment of an uncertain one? The building owner does not know the building world; the architect should. If he does not, the surveyor should be able to help him. Good builders want fair prices. If employer or architect seek to get the work done for less than its fair market value, he seeks that which is out of the pale of true business, and loses touch with good builders. If in an unhappy moment the employer is beguiled, by the hopes of saving a small percentage, into the employment of an insolvent builder, woe betide him. The "daughter of the horse-leech" was a poor thing in her demands compared with this interesting creature. An unceasing demand for certificates; when refused, unsparing abuse of the architect. The money obtained from this work, often before it is due, carried away to keep speculative work going; the work starved for want of men and materials, bankruptcy at an opportune moment, the work dragging its slow length along, partly finished by trustees, litigation, "heads I win tails you lose" catastrophe. This is no fancy picture. Those who have spent a long professional life among contentious work can tell of many such. How impor-

tant then it is that an architect should protect his employer by pointing out to him the absolute necessity of employing "good men and true" only. An architect should also caution his client against accepting a tender manifestly too low. Doubtless it is tempting to an employer to get his work done for less than cost to the builder, but it is not business, and does not pay in the long run. Employers too often say, "I employ an architect; he will protect me, he will see that value is received before a certificate is given." It may come right in the end, sometimes it does not, and when it does not an honest man will not have much sympathy for the employer in his troubles.

In town work "injunctions" are often a terrible risk to the employer. When they come the builder usually suffers also from delay and incidental expenses, but the bulk of the loss of course falls on the employer. These injunctions appear to be things which "no fellow can make out." Each judge appears to do that which is right in the sight of his own eyes. Every tub here stands on its own bottom. You find a case very nearly on "all fours" with your own, and a very pronounced decision thereon; but now another judge decides quite otherwise, and the employer suffers accordingly. And the injury done to handsome new buildings in London alone for the protection of houses scarcely fit to be dog-kennels may safely be stated at hundreds of thousands of pounds sterling. And confusion in this "light and air" business having become worse confounded, no light appears at present to light up the chaos which prevails. It is pretty nearly all blind chance as to what will happen. Of course there are many more risks to the employer, but let these suffice.

In conclusion. "To employers." Count the cost. Remember the stigma which has attached from days of old to the man who began to build and was not able to finish. Employ competent architects, surveyors, and builders, and trust them. When you have settled on a design, "let it alone." Pay fair prices for good work.

"To architects." Hold the balance even between your client and the builder. Try to keep your client out of mischief. If you see him running against a post, point out the post to him.

"To surveyors." Do your work thoroughly and conscientiously. Duty first. Nothing extenuate, nor set down aught in malice.

"To builders." Do not rush after work at unremunerative prices. Do not take risks without equivalents. Refuse contracts where the clauses are unfair. Employ good workmen. Pay fair wages and use good materials. Avoid doubtful employers.

"To arbitrators." Decide the cases before you on their merits, not according to your prejudices. To slightly vary some recent words of Mr. Justice STEPHEN, "arbitrators are bound by just as solemn an obligation as that which bound judges of the land to be guided in their conduct by the law as they understand it; and if they misunderstand it, or wilfully disregard it, they resemble unjust judges."

"To all." If it be possible, live peaceably with all men.

JOSIAH HUNT.

## PARIS NOTES.

DURING the past week the great topic of discussion and gossip in the artistic world of Paris has been the difference—to employ the somewhat euphemistic French term—that has arisen between Mrs. Mackay, the wife of the well-known American millionaire, and M. Meissonier. Amid the flood of talk and angry recrimination from the partisans of both sides, it is impossible to arrive at the merits of the case; we therefore confine ourselves to a relation of the facts as given in the Paris papers. It appears that Mrs. Mackay had commissioned Meissonier to execute her portrait, which was exhibited at the last Salon. Thereupon the lady complained that the painting did not appear in a sufficiently advanced state for exhibition, and that, moreover, it was rather a caricature than a likeness. Great was the anger of the artist, who immediately summoned Mrs. Mackay to accept delivery of the work as it was, and to pay him the sum of 70,000 frs. Mrs. Mackay received the canvas, paid for it the sum demanded, and forthwith put it on the fire.



An exhibition of Meissonier's works is announced for the spring at the Georges Petit Gallery in the Rue de Sèze. The net receipts will be handed over to the Committee of the Night Refuge Fund (*Ceuvre de l'Hospitalité de Nuit*).

The works of C. A. Sellier, lately exhibited at the Ecole des Beaux-Arts, were disposed of last Monday at the Hôtel Drouot. The best prices realised were:—7,200 frs. for a *A Blacksmith's Forge at Audelys*; 4,000 frs., *An Alchemist's Laboratory*; 1,650 frs., *Leda*, exhibited at the 1880 Salon; and 1,450 frs., *A Butcher's Shop near the Tiber*.

M. Gautherin has received a commission from the Department of Fine Arts for a marble bust of the late M. Achille Martinet, the engraver and member of the Académie des Beaux Arts.

The hearing of the great Trouillebert-Fedesco suit began in the First Chamber of the Paris Civil Tribunal on Saturday last. The defendants, MM. Fedesco frères, are picture dealers, from whom damages are sought on the ground that a painting entitled *La Fontaine des Gabourets*, which had been sold to M. Alexandre Dumas fils for 12,000 frs. as a work of Corot, was in reality by M. Trouillebert, who offered to prove that it formerly bore his signature, and that his name had been obliterated and replaced by that of the great landscape painter. The plaintiff furthermore stated that a colour dealer had in the first place bought it of him for the insignificant sum of 150 frs. On behalf of M. Fedesco, M. Cléry contended that it was more than doubtful whether M. Trouillebert was the author of the picture, even supposing that it was not the work of Corot; the plaintiff, in fact, had never previously revealed himself as a landscapist, although he had contributed annually to the Salon. He doubtless brought this action with a view of creating a little stir round his name, and bringing it prominently before the public. Legally he had no claim, for there had been no relations between the parties. Such was the gist of the defence, and, at the conclusion of M. Cléry's speech, the case was adjourned for a week.

By decree of the Minister of Public Instruction and Fine Arts, M. Edmond Guillaume, architect of the Louvre, has been appointed to succeed the late M. Lesueur as Professor of the Theory of Architecture at the National School of Fine Arts. For the seat left vacant in the Académie des Beaux-Arts by the decease of M. Lesueur there are no less than six candidates—MM. André, Diet, Doumet, Magne, Normand, and Renard—all of whom have some claims to election, although the first-named has probably the best chances of success. The architectural section of the Academy will make its recommendation on Saturday (to-day), and the ballot is fixed for March 1. For the late Professor Dumont's seat in the sculpture section, there are already three competitors in the field.

The distress undoubtedly prevailing among the labouring classes of Paris, particularly in the building trade, has rendered it probable that several projected public works which, though adopted in principle, had been indefinitely adjourned for execution, will be taken in hand without much delay. By request of the Prefect of the Seine the city architects are drawing up a list of those municipal works which, having been approved by the Council, may be proceeded with at once. At the same time, an active exchange of correspondence is going on between the City and the State relative to the great undertakings, such as the reconstruction of the Sorbonne and the opening-up of the Palais Royal, the expense of which is to be borne jointly. A demand for credits for the immediate commencement of certain works in the first-named category is expected to be laid before the Municipal Council during the course of next week.

The Paris Markets' Committee have decided to build a new market on the Boulevard Richard-Lenoir, between the Rue Boule and the Rue Sedaine, to be devoted especially to wholesale trade in eggs, butter, and cheese, and to the sale of horses.

Denon's grand staircase in the Louvre, which has remained in an incomplete state since 1866, is now progressing towards completion. The vaulted portion of the roof will be inlaid with mosaics, but this part of the work will require several months longer.

The heavy part of the alterations that are being carried out in the vast Salle des Etats is now finished. Readers of *The Architect*, in which an account of the work to be done appeared some months back, may remember that the principal change consisted in removing the massive roof and replacing it by a glazed one. This has been done successfully, and, in point of light, the large hall is now fitted to receive pictures, which are to be chosen by a committee of artists.

The singular pretensions now being put forward by Paris workmen may be judged from the depositions of carpenters and sawyers made before the Parliamentary Committee of forty-four elected to examine the industrial crisis. The representatives of the former complained that the Treaty of Frankfort permitted the importation of made-up joinery at a lower rate of duty than the rough wood. Such a statement is so impossible as to be scarcely worth refuting. The same delegates next complained of the use of machinery in their trade. They dare not propose the destruction of machines, but demanded the imposition of a heavy tax upon them, levied in proportion to the work turned out. Another grievance was that the masters did not pay the rate of wages fixed by the City of Paris scale, which allows 1 fr. 15 c. per hour for carpenters' work. In relation to this it must be remarked that the rates were never intended to be applied, being only an artificial standard for estimating the maximum cost of work in the plans drawn up by the municipal architects and engineers. Thus, when public tenders are invited, they are almost invariably found to be much below the official limit price. The men, however, refuse to see the matter in this light, and seem to imagine that they have a standing right to this maximum rate of wages. They stated, moreover, that the masters took advantage of the existing stagnation to pay only 80 c. an hour, though 80 c. or 8 frs. for a day of ten hours does not appear starvation wages. The Union to which these men belonged comprised 200 shops and 5,000 members, of whom, they averred, 3,500 were out of work: but this latter statement is said to be considerably exaggerated. So far, however, it may be said that the principal grievance of the trade societies admitted to give evidence appears to be that they have had to work under the maximum rates of wages used in estimating the cost of public works.

#### ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE eighth ordinary meeting of the Institute was held on Monday evening, Mr. D. Brandon, vice-president, in the chair. Attention was called to the drawings of the Soane medallist for 1883, Mr. R. A. Briggs, which were hung on the walls, and it was stated that a second moiety of 25% had been awarded to Mr. Briggs.

A paper was then read by Mr. Killingworth Hedges, A.M. Inst. C.E., of which the following is an abstract.

##### Precautions to be Adopted on Introducing the Electric Light into Houses.

Mr. HEDGES began with a reference to two papers on the electric light read before the Institute by Mr. Slater in 1881 and 1882 respectively, and spoke of the great progress made since in the commercial application of the invention. To facilitate the lighting of streets and private houses the Electric Lighting Act of 1882 was passed, under which twenty-three applications for provisional orders were made in that year by local authorities and 106 by companies formed for the extension of the system, which, however, the stringency of the regulations laid down by the Board of Trade had temporarily checked. Meanwhile a largely-growing number of occupants of houses had set up the necessary plant for producing the light themselves. A description was then given of the plan for supplying electricity to private dwellings by means of batteries. The most effective system of the kind seemed to be that invented by Mr. Ross. The various modes of generating electricity were next rapidly reviewed. In town houses a gas motor was, as a rule, the best; in country houses all three sources of power—water, steam, gas—had been employed. Common coal gas could be dispensed with by using Dowson's gas, of which a description was given, and whose great advantages were set forth at length. The cost had been proved to be 50 per cent. less than that of the ordinary article at 3s. per 1,000 feet. The engine-house would contain the dynamos, which should be fixed on wood, to insulate them electrically from the ground. From the dynamos the current should be taken to a switch-board. If accumulators were used the current from these would join on to the same board. From this switch-board the mains went to the lamps, starting as a large cable, which branched away like the gas-pipes until each incandescent lamp was reached. It was of



the last importance in electric lighting that the current should always be uniform at all times in each individual part of the work, and independent of changes in other parts. The compound shunt-machine for effecting this was then described, and it was shown that by means of it the regulation of the electric supply is more perfect than that of gas. The honours of this invention were claimed by several of our British electricians. A highly effective form of the machine was that designed by Messrs. Crompton & Kapp, who had greatly improved on the Bürgin dynamos, while Dr. Hopkinson had not only materially reduced the cost of Edison's, but had increased the commercial efficiency some 3 per cent. The actual efficiency of the improved Edison-Hopkinson dynamos was now 94 per cent., and its commercial efficiency 88 per cent. To enter, however, into a comparative description of the different systems possessing these advantages, and to discuss their relative merits, was beyond the author's scope, and he therefore proposed to describe some of the principal features of a supply of electricity and to point out the precautions necessary to its safe introduction and the guarding against fire risks. In the first place, to understand what this electricity is, the author said, we must disabuse our minds of the notion of that "invisible subtle fluid" of which men still talked so nervously, but which we daily use with impunity for ringing bells and working telephones. The electricity used for lighting was doubtless far more dangerous if uncontrolled, but if properly installed it was made as harmless as the galvanic battery employed by the popular lecturer in his experiments. The light was nothing but electric energy in the form of white heat, and the only peril was that this heat might be developed where it was not wanted, and might so cause fire. The possible danger from this cause had already attracted much attention both in this country and abroad. A special fire risk committee appointed by the Society of Telegraph Engineers and of Electricians was formed in 1882, and a set of excellent rules were drawn up by it, which were adopted *mutatis mutandis* by some of the insurance companies, and also by the Board of Trade in its "model order." Neither these rules, however, nor the "Standard of Requirements" laid down by the New York Board of Underwriters could be said to embrace all the changing details of an electric light installation. Such details could only be arrived at after the electricity has been worked a sufficient length of time, and has been generally distributed like gas. With a view of eliciting further discussion on the subject, the author proposed to offer a few general remarks as a small addition to what had already been put forth by the fire risk committee. The first source of danger to property, he said, is in the mains and branch wires which conduct the electricity from the engine-house to the incandescent lamps, which were distributed over a house in much the same way as gas. If these conducting wires were of sufficient calibre, and made of a material uniform in its resistance, the current would not develop in its passage any dangerous heat. In arguing the question as to the proper sectional area of the conductor, the author remarked that the electro-motive force had been compared to the difference of head of water necessary to cause a quantity of fluid to overcome the resistance of a pipe, whereas it was more like water soaking through sand, in that the whole of the cross-section of the wire interposes a resistance which in large conductors doubtless varies proportionally to the temperature of each section according to its distance from the outside radiating surface. As for the material of the wires, it was commercial copper, which was never absolutely pure, but could be got as high as 96 to 98. Now, since the wire's resistance depended on its purity, a short length of inferior wire might upset calculations based on the hypothesis that none but the purest wire is used. Thus not only might that inferior section become dangerously heated, but there would also be a waste of power. Copper was always used for electric lighting purposes, both because it can be got purer than any other available metal and because, next to silver, it is the best conductor of electricity. Having examined the proportion of the electric conductors to their work, the author went on to discuss the question as to the effect of a stream of electricity continually passing along them. He had found that if heating goes on largely, a change in the conductivity of impure metals may take place, but pure copper is apparently unchanged. A summary view of the evidence on which the conclusion rests was given. Passing thence to the subject of electrical connectors and joints, the author said special attention should be given to these, including not only all the joints where the branch wires lead off, but also the connections made with binding screws. Besides causing resistance in the circuit, bad contact between a wire and a terminal would engender heat; hence the area of the contact piece should be large enough. It was further shown how provision should be made in the case of a sliding connection for taking up the wear and firmly pressing the surfaces together. The joints used were most important factors in an electric light installation. For these joints solder alone should never be relied on. A joint must be made mechanically perfect, and considerable pressure used to unite the surfaces; the solder might be then applied to keep the whole air-tight. The next section of the paper showed how the danger arising from short circuits was to be met with. The term, it was remarked, meant that the current, instead of going a circuitous route, takes the shortest path,

where, having no work to do, it causes fire. The three ways in which short cuts might be set up were pointed out, as well as the measures to be adopted in such emergencies. The only preventive was a cut-out or safety fuse. The author referred to experiments of his own in order to ascertain the most suitable and reliable material. After trying numerous foils he obtained a special alloy of aluminium, whose resistance as compared with that of silver was about 45 per cent. Testing an installation was the next subject for consideration. To insure this being properly carried out, a current capable of overcoming a high resistance should be sent through the whole of the wires; that from an ordinary battery was of little use. A portable hand apparatus was used for this purpose in America, which, on turning a handle, sends a current through every one of the wires and shows any leakage by ringing a bell. The foregoing remarks, said the author, had been made with reference to incandescent lighting, but applied to arc lights also, which latter brought with them other fire risks of their own. The chief of these was the danger arising from pieces of incandescent carbon dropping, and more fires had occurred from this cause than from any other. Before quitting this subject he gave some interesting information as to how some of the fires caused by the electric light in America had happened. In one district, in which there were sixty-one mills, fifteen fires were due to some form of "short circuit," generally owing to the leakage of water or the washing of floors. All of them would have been prevented by proper insulation and reliable fusible safety plugs. Three fires were caused by cross arcs of one wire to another where uninsulated wires were fastened against conductors. In one instance the conductor was formed by dust settling upon uninsulated wires, and on a damp day it absorbed enough moisture to make a path for the formation of a cross arc which started a fire. In a second case the wires were fastened to a damp beam which was decayed and burnt nearly in two by a smouldering fire. In a third instance damp brickwork in a tunnel became a sufficient conductor to set up an arc which did no material damage, but injured the dynamo. These fires were not necessarily destructive, as they generally occurred during working hours, and so were soon discovered and dealt with. Electricity, though having no smell, like gas, to betray a leak, showed when it was escaping by the diminished brilliancy of the lights. In London Captain Shaw reported no fire as due to the electric light for 1882, and but one in 1883; this was due to the overheating of the wires. In this country the installations had, as a rule, been in the hands of skilled persons. It was most necessary that in the eagerness and hurry to push forward the new light, the work of wiring houses and fixing the lamps should not be left to bell-hangers and others destitute of the requisite knowledge of electricity. The best guarantee of safety in the use of the electric light was the employment of experienced men in the work of installation. In such hands it was far less dangerous than gas, which not only poisons the air we breathe, but ever lurks as a slumbering volcano ready at any moment to put forth a terrific power. When properly installed and managed electricity was by far the safest illuminant known. It was to be hoped the insurance offices would soon recognise the fact by reducing the premium on all buildings from which gas is excluded. The alleged comparative immunity of the electric light from accident was accordingly treated more in detail in a special section, which was followed by the author's closing remarks on the important subjects of wear and tear and working cost, all of them involving a good many technicalities in their discussion.

Mr. SLATER moved a hearty vote of thanks to Mr. Hedges for his paper. That gentleman, he said, had alluded to the disappointment that had been felt at the comparatively small success of electric lighting as compared with what was expected of it. Three years ago, when he (the speaker) had brought this subject before them, expectation was at the highest pitch. The actual achievements effected in France, and the success of the Edison experiments, had all combined to excite in the public mind the most extravagant expectations. Stock Exchange speculations and immature instalments put up by incompetent persons caused the failure, and the speculations led to a number of inventions which hurt the British public in a tender spot, namely, the pocket. Then followed a shriek that electric light was a failure, that the companies must be wound up, and the money returned to the British pocket. The scenes, for instance, that took place at the winding-up of the Brush Company were utterly discreditably to the public. If ever there was an invention where the motto *festina lente* ought to have been adopted it was in regard of electric light. Mr. Slater having adverted to the use of the light by the large hotel proprietors, steamship companies, private owners, &c., asked whether the light could be pronounced a failure? Of course there were difficulties to be overcome; but the centre of the difficulties had now shifted, and, as Mr. Hedges pointed out, laid principally with the mains and general distribution. Mr. Hedges, he thought, had rather shirked two difficulties as to existing houses, namely, the wiring and the lamp-fittings. If one began to cut chases, damage was done; the cutting-away and making good entailed an enormous cost. It was impossible to estimate what the ultimate cost would be beforehand, so that in the end they would cause great disappointment to their clients. The plan was not to cover



the wires at all. The wires might be carried along under a dado where they would be scarcely visible at all. Utilising existing gas-fittings for purposes of economy he considered was most unwise.

A VISITOR spoke in praise of Mr. Hedges's foils. He said he had tried them and they acted with a regularity that had astonished him. There was, besides, a great peculiarity about them that prevented their indiscriminate use by people who did not understand their properties.

Mr. GRUNING said he was particularly interested in the question of cost, and wished he had another year's experience in that direction. He did not pretend to understand all the other details of the subject.

Mr. JOHN HEBB said that the Metropolitan Board of Works had under consideration the revision of the regulations which they had made some time back.

Mr. CROMPTON said that to speculation might be traced all the ills that electricians laboured under. But they knew that the invention had progressed steadily and quite as quickly as was possible or desirable, and quite as rapidly as the most hopeful among them could have expected. Dynamos and lamps had improved, cost of apparatus had decreased, and what had been the greatest reproach, the uncertainty of the light and its likelihood to go out, had been removed.

Mr. HEDGES then replied on the various points that had been raised, and in the course of his remarks alluded to the success of the light at the Savoy Theatre, and said that Captain Shaw's reports showed that more than half the fires in London were due to the use of gas or petroleum oil.

The proceedings terminated with a vote of thanks to Mr. Hedges.

#### MR. W. B. RICHMOND ON MODERN ART.

AN address was delivered on Wednesday to the students of the Birmingham Society of Arts and School of Art, by Mr. W. B. Richmond, the president for the year. Mr. Richmond said that the subject he proposed to examine was the position of modern art, its relation to ancient art, the relation of religion to it, and the social conditions under which it had flourished. It was not with the views of pessimists that they should approach the subject, nor with one of too great regret that one age had not the same instincts of refinement, of poetry, or of taste as other ages had been the happy possessors of, for such a spirit would land them nowhere, and would not help them to see what real good might be got out of a state of civilisation wholly different to, but alike interesting, or the progress of the history of men's minds, and their achievements in present conditions of life. But while they admitted this they must also grant that modern art, while it had gained much had also lost something that was the natural heritage of it long ago; and the causes of such differences were matters of regret. There could be no doubt that the general drift of art, that was pictorial art, not only in this, but in all European countries, was towards the strongest naturalism, and that materialism had conquered for the moment all idealism. Further, that very similitude as opposed to symbolism was the verdict of good or not good art of the *vox populi* in the present generation. Such thoughts as by their delicate abstract quality seemed to demand a treatment of what was generally understood as conventional, or, as some would say, pedantry, or, as he should say, "style," when presented without the glowing colour of nature, nor with excessive resemblance to her more attractive, and consequently more superficial, beauties, were disregarded or eyed with contempt or even scorn—with hurried glances of resentment by an ever increasingly restless generation. The study of form for its own sake, whether in sculpture or architecture or painting, was much neglected, because the eyes of the public were not yet sufficiently delicately trained to care for or appreciate beauties of a calm, restrained character, but were content only to be immediately satisfied for the moment and on the instant, resenting all trouble patiently to study beauties of the higher kind, which were only discernible to the cultivated eye and the cultivated mind. So it was that, however faulty in proportion or absent in design so many of our public buildings were, the excessive use of ornament, however commonplace or vulgar, attracted and satisfied a sense for false splendour and costly blundering magnificence. Any revival of architecture, or to speak more justly, any birth of an architecture in England adapted to the climate, to the absence of light, and to the means to which it was to be applied, must, to say the truth, be very far off. We were not Greeks, nor Romans, nor Mediaevals, nor Goths; our banks were not temples to Apollo; our churches were not fortresses; our houses need contain no eyelet-holes for bowmen; nor were our courts of law ecclesiastical buildings. So it was not by following any traditions of ancient art, excepting its spirit of adaptability and sound sense, that we could expect a result either convenient or artistic. After further elaborating this contention, Mr. Richmond went on to speak in some detail of the characteristics of the Greek and Early Italian art, showing how they sprung out of the social surroundings of the spiritual

convictions of the times to which they belonged, conditions vastly different from those now existing. They might, he said, divide the motives of ancient and modern art thus: to the former they put the gods, the saints, angels, all that belonged to an abstraction, and man at his best, with his frailties and his absolute identity and personality; while to the latter they put man as a fact with no belief in mysteries much, not even poetic, with few ideas beyond immediate well-being or well-doing, but full of generosity and a great love of the natural beauties of the sky, the earth, and all that belonged to both saving the spiritual or suggestive thoughts which belonged to other ages of not less materialism, but of more poetry. Coming to the point of what we had to look for in modern art possible and natural to the conditions of our time, Mr. Richmond said that one of the most healthy signs of the English nation was its genuine—indeed passionate—love of landscape. There was no people in Europe so alive to its beauties. Landscape painting might be said to be a modern art. Of all the arts the art of bringing the fleeting beauties of a sky together and of leaving for ever impressed upon canvas the moment any welcome of the early dawn, the wealth of sunlight in the midday, or the sad suggestions of sunset, twilight, and the solemn night—that art had perhaps the nearest claims to general sympathy. The art of Turner, of old Crome, of Constable, had still in front of her a vast horizon of greater truth even and of yet deeper meaning. This lovely art of arresting the fleeting effects of all varieties of scenery was one of our chief inheritances, and it might be said that, while the sky remained in its infinitude of forms and colours, and the earth teemed with her inexhaustible beauties from a blade of grass to the forest from hillside, one of the most precious forms of art could never die, but must progress with the keener perceptions of man for its natural beauties and his knowledge of the deep hidden science thereof. Of decorative art, that of the severest and least seductive kind, having for its chief charms the entire beauty of form, the purest sentiment for balance of lines and a method of colouring such design was reticence and dignity. Although so severe and restrained a manner of design few could ever hope to attain to, it was a quality the most to be fostered at this present moment. In conclusion, he praised with all heartiness the really healthy spirit in which our younger painters, to whom we had to look for our future in art, attacked their work. All great poets, statesmen, and painters had been the children of their generations, and had touched the dominant note most characteristic of the chord of the instrument on which they were playing. The spirit of English art must be English art to the core, or it was nothing. To be a vital part of the intellectual movements of so great a nation it must be animated by its own time, though guided by the spirit of ancient art, because its watchword was sincerity.

#### GOLDSMITHS' EXHIBITION IN PESTH.

THE Goldsmiths' Art Exhibition was opened on Monday. The exhibition comprises over 7,000 ancient Hungarian *objets d'art* in gold and silver, and of the greatest rarity, together with ornamental crowns, vessels, arms, and ecclesiastical utensils. The total value of exhibits is estimated at 15,000,000 florins.

The Vienna correspondent of the *Standard* says the principal objects have been lent by the Imperial "Schatzkammer" at Vienna, and by the various archdukes, magnates, and ecclesiastics, and a few have come from abroad. Amongst the crowns is one set with pearls, and with which King Ladislaus and the great Matthias Corvinus were crowned, and the so-called "funeral crowns" of King Bela III. and his wife Anica of Antioch, found in their graves at Pressburg. There are also several pieces of enamel from the crown of the Emperor Constantine Monomacchus bearing portraits of the emperor, his wife, his sister, and two dancing girls; and a crown discovered in the last century during the excavations made at Grosswardein for fortification purposes, and whose origin is uncertain. Another remarkable exhibit is the so-called exchequer of the Gothic king, Atanarich, consisting of a number of golden cups and vases weighing 2,400 ducats, discovered at Torontal. Amongst the ecclesiastical articles are the pyx and chalice presented by the Hungarian king Louis of Anjou to the chapter of Aix-la-Chapelle in 1340, and now lent by it; further, a huge golden bust of King Ladislaus crowned, from the high altar of the cathedral in Raab, besides about thirty golden chalices from the time of Matthias Corvinus when the goldsmiths' art in Hungary was at its height. There is further a golden cup, richly set with jewels, which possesses a remarkable history. It was given in 1598 to Count Nicolaus Palfy by the Austrian States for services rendered in the reconquest of Raab from the Turks. This cup, which weighs 1,000 ducats, and is still more valuable for its rare artistic merit, was afterwards given by a son of this Nicolaus Palfy as ransom to extricate his father from the hands of the Croats, who had made him prisoner. It thus came into possession of the Sultan, and was eventually presented to the Austrian Emperor Leopold, who, recognising the arms of the Palfys on it, restored it to the family.



## NOTES AND COMMENTS.

THE London Corporation will astonish a good many people by what they propose to show at the forthcoming Health Exhibition. While the majority of exhibitors will bring things which belong to the present age, the City authorities intend to do more, for they will represent, as far as space will admit, one of the streets of old London—probably Cheapside. In some international exhibitions typical houses have been constructed in connection with the works of various nations, but this will be the first time in which ancient work is to be reproduced on so large a scale. The representation of a City street will impress visitors with the historic importance of the Corporation, and it will be one of the most popular sights of the exhibition. But care must be taken to ensure that the street is not a theatrical scene, and that it is archæologically correct. The expense of a row of houses in timber and plaster would not much diminish the City coffers.

BARON HUDDLESTON has borne testimony to the commodiousness of the new Assize Courts at Shrewsbury, which have been completed lately from the designs of Mr. T. M. LOCKWOOD, of Chester. According to his lordship more convenient courts are not to be found in England. Baron HUDDLESTON always endeavours to win the esteem of juries, and when he was a Member of Parliament he used to ask a great many questions about the absence of fitting accommodation for jurymen in courts. His lordship is fond of telling the story of the architect who, in planning a court house, began by calculating what was the smallest space in which twelve grown men could be cooped. In Shrewsbury there are separate boxes for the jury and the jurymen in waiting, and they are not places of torture for those who have had the privilege to be summoned. At a time when so much is heard from the Bench about the shortcomings of architects (and the judges' remarks have done much to bring the profession into disesteem), it is some satisfaction to discover that there is at least one architect in England who is able to meet judicial criticism.

A HOUSE-TAX is levied in Greece which produces 56,000%, or one-tenth of the entire direct taxes. In addition, a licence-tax is paid by everybody exercising a profession or trade, and it is based on the rent paid by professional men for their dwelling-houses and by tradespeople for their shops. It amounts to 56,000%. The growing prosperity of Greece is suggested by the augmentation of the house-tax. In the year 1848 it amounted to a sum of 7,680%, whilst this year it is calculated to bring in a sum of 56,000%, without counting the tax levied on the houses of the newly-ceded provinces. Indeed, at the rate the present construction of dwelling-houses is being carried on in Athens (where a stranger on arrival might suppose some general conflagration had taken place and that a new city was being built), it may confidently be predicted that in the course of a very few years—for the builder is at work throughout the country, and not exclusively in Athens—the house-tax will bring in at least 100,000% a year to the Greek Treasury.

THE archiepiscopal city of Canterbury is not an inviting place for a painter to dwell who has to depend for existence on the sale of his pictures. A Mr. HAYMAN, who has the misfortune to dwell there, was sanguine enough to suppose that if he painted the enthronement of Archbishop BENSON he would be rewarded by his fellow citizens. A committee was accordingly formed to raise money by guinea subscriptions to purchase the picture, which contained portraits of the local, clerical, and corporate notabilities. But only thirty-nine subscribers could be found, and the total sum received was 40*l.* 19*s.* 6*d.*, one subscriber having munificently added an extra sixpence. Seven guineas had to be deducted for expenses, and Mr. HAYMAN receives 33*l.* 12*s.* 6*d.* for a work which is described by the Dean as being very accurate, and considered worthy a place in the Canterbury Guildhall. A school of art has been lately established in Canterbury by Mr. SIDNEY COOPER, R.A., but unless there is a change the students need not expect much patronage in their city.

A CASE lately tried in Glasgow recalls the fact that there was a maxim of Roman law which enjoined that whoever painted a picture became the owner of the work, although the

canvas on which it was painted was the property of somebody else. That maxim appears to be accepted in Scotland, but it is not certain whether it has equal authority in England, and, unless we are mistaken, HAYDON was often in difficulties in consequence of the doubt. In a corresponding case in Ireland, where lithographic stones had been lent by a printer, and he claimed possession of them, with the artist's work that had been drawn upon them, the Courts were divided in opinion as to the ownership. But the most equitable conclusion would be in those cases to adopt the Roman practice, although in the case of gems and works in precious metals the rule would not hold.

THE condition of many London houses may be inferred from the report of the London Sanitary Association. During last year 404 houses were examined by the officers. In nine the drains were entirely closed up, and there was no connection with the sewer. In seventy-nine houses, or about 20 per cent., the soil-pipes were found to be leaky, allowing sewer-gas, and in many cases liquid sewage, to escape into the houses. In ninety-three, or 23 per cent., the overflow-pipes from the cisterns were led direct into the drain and soil-pipes, allowing sewer-gas to pass up them and contaminate the water in the cisterns, and in many cases to pass freely into the houses. In 269, or about 67 per cent., of the houses inspected, the waste-pipes from the baths and sinks were found to be led direct into the drain or soil-pipes, thus allowing the possibility of sewer-gas passing up them, instead of these pipes being led outside the house, and made to discharge over trapped gullies in the open air as they should be. The figures do not seem to be quite correct, unless we assume that the same house may come in more than one class, but they show how much remains to be done to make ordinary houses perfect.

THE authorities of the City and Guilds of London Institute have been considering what further steps should be taken to develop the system of technical education which they have undertaken. It is proposed to extend the teaching in the various classes, and for this purpose four additional professors are to be at once appointed in the departments of Chemistry, Engineering, Mechanics, and Mathematics and Physics, together with teachers of languages, demonstrators, and lecturers on technology. At first it was supposed that the Institute would undertake only elementary teaching such as might serve for apprentices; but it has been determined that the instruction in the classes will be adequate to the requirements of persons who intend to become (1) technical teachers; (2) mechanical, civil, and electrical engineers, architects, builders, and decorative artists; (3) principals, superintendents, and managers of chemical and other manufacturing works. It is to be regretted that the authorities do not propose to establish at present a department of architecture and building. It is admitted that the addition would not need any great increase of the staff, and it may be added that London is more concerned in building than in some of the technological subjects. The building classes, if open in the evenings, would be sure of success.

BANKRUPT and compounding builders give a great deal of trouble to architects and building owners as well as to their creditors. At present it is difficult to say what their position is under the new regulations. It has just been laid down by Lord Justice BOWEN that the agreement consequent upon the familiar clause in a building contract which states that all materials brought upon the site by a builder during the progress of the work become the property of the building owner, need not be dealt with as if it were a bill of sale. That decision corresponds with what was generally held, but inasmuch as the Act of 1878 relating to bills of sale comprised "any other instrument by which a right in equity to any personal chattels shall be conferred," it was thought the obnoxious clause was insecure. But it still remains unnecessary to register a contract deed as a bill of sale. Another case was before the courts on Wednesday. A builder assigned by way of mortgage the sums he claimed under a contract, and the assignees sued for the amount. The building owner (Sir F. PEEK) applied to have the builder made a party to the action, either as plaintiff or defendant, in order to ensure that it might be ended once for all. But under the new rules the builder's consent is necessary to such a course, and, as that was not given, the application was refused.







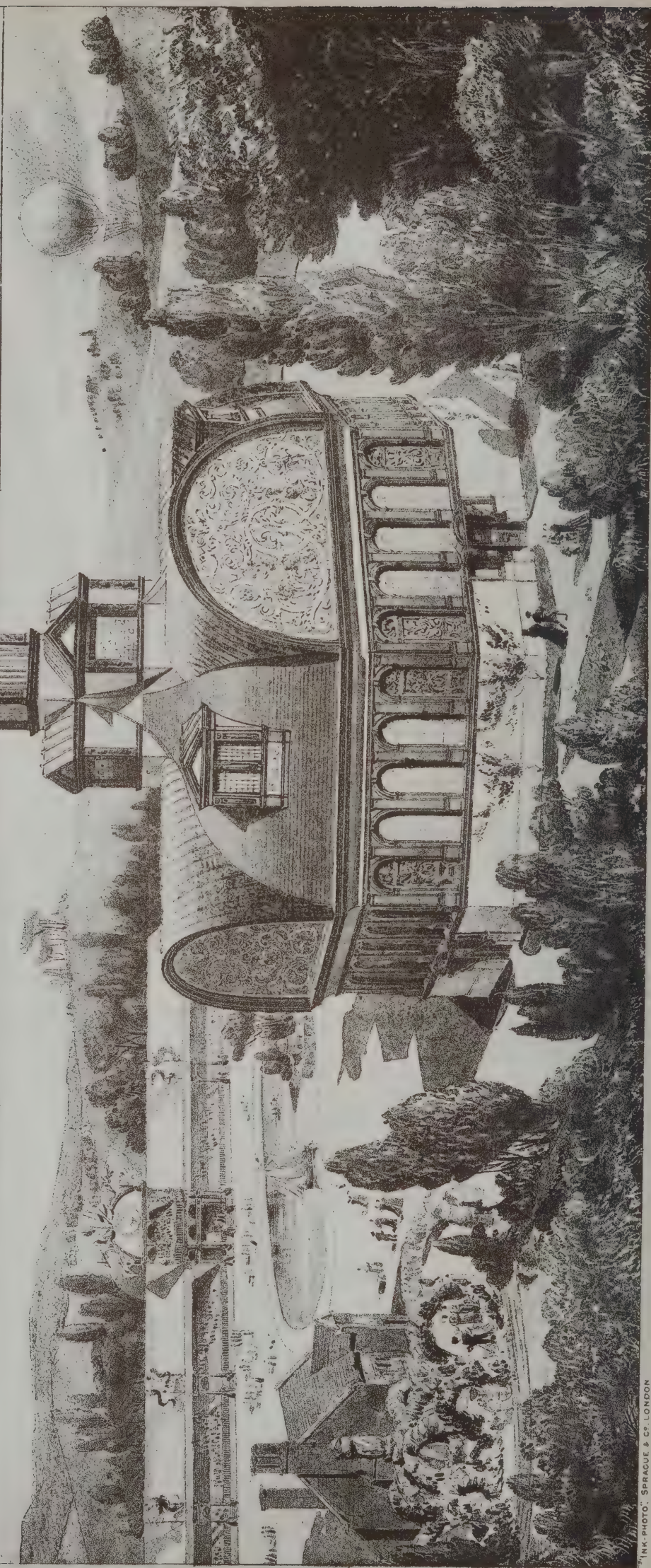
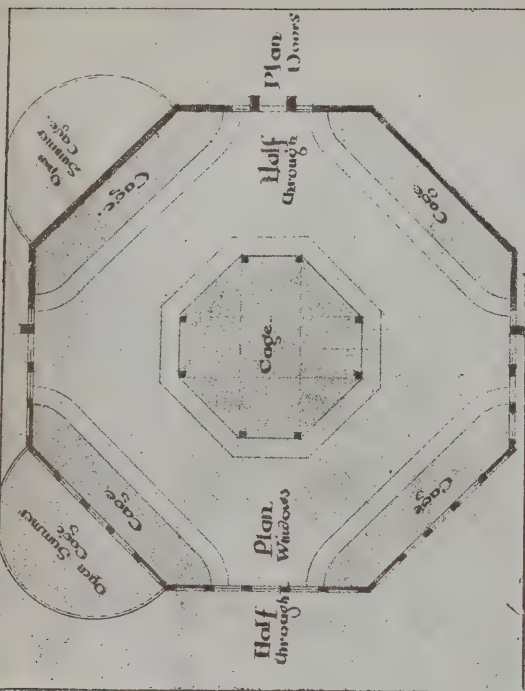


"FINGARRY" MELTON OF CAMPSIE, N.B.  
JOHN B WILSON, A.R.I.B.A. ARCHITECT.









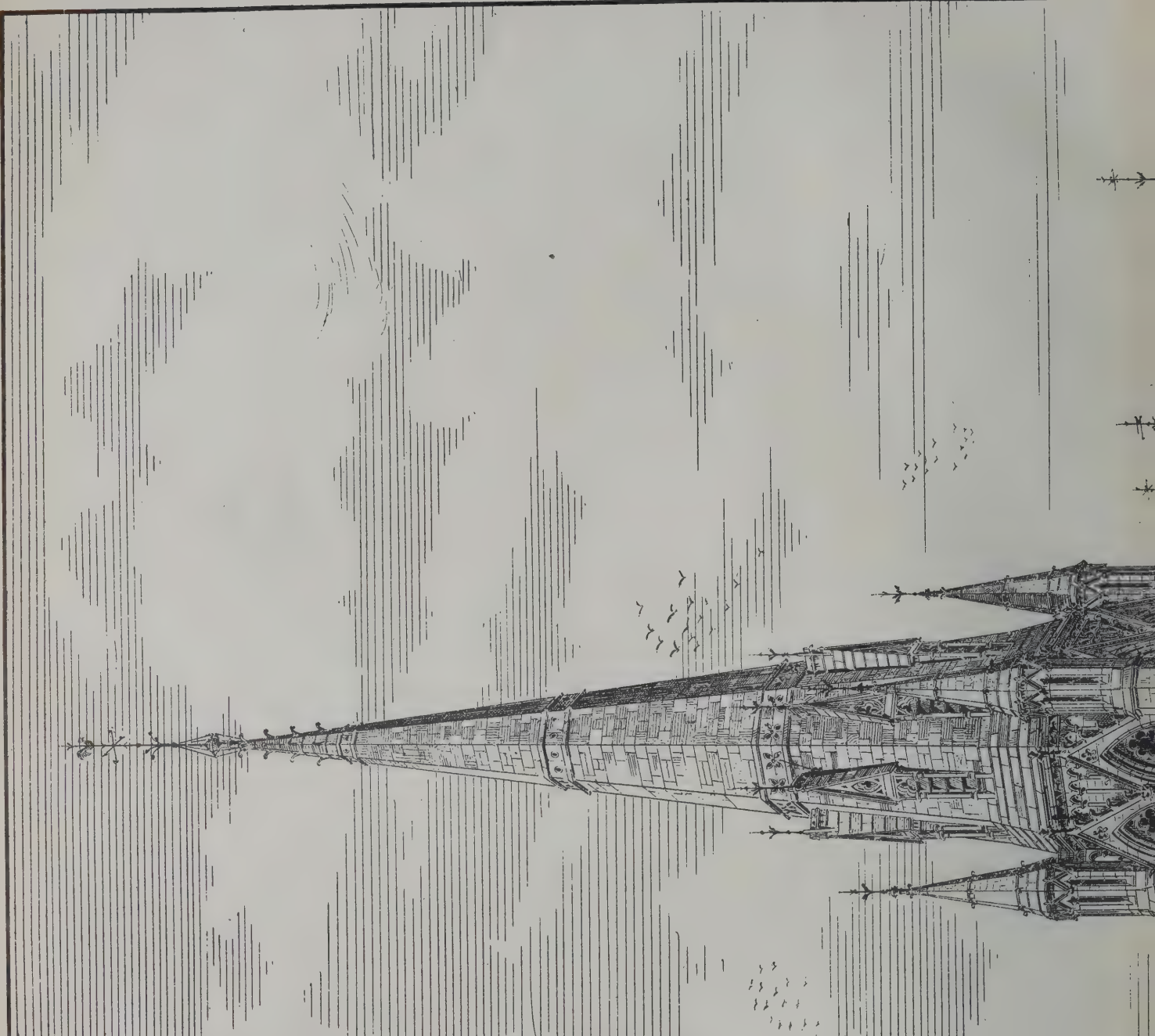
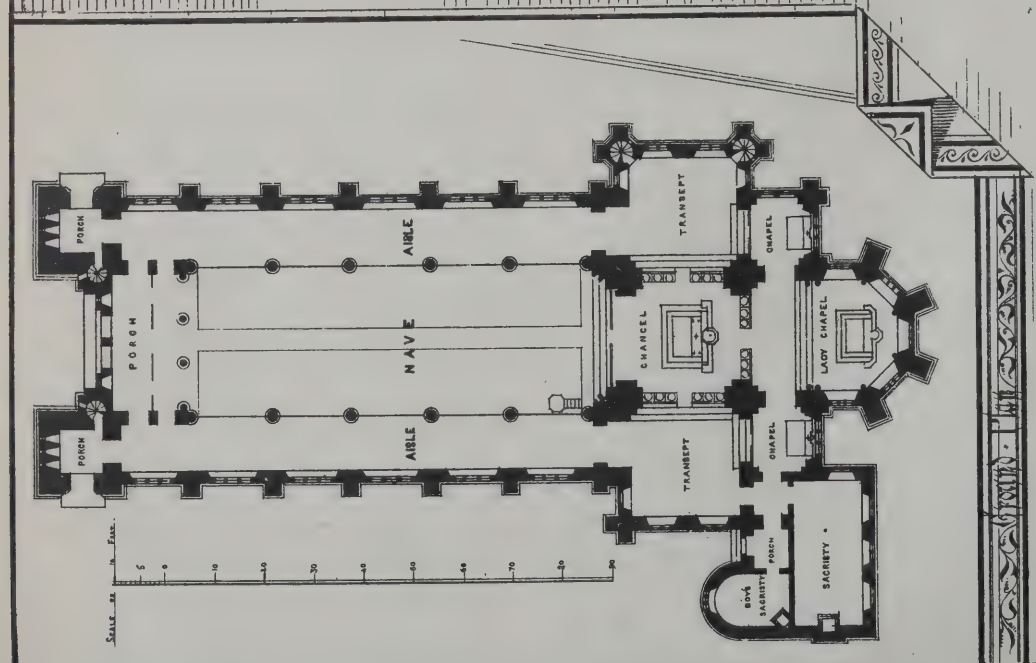
MONKEY HOUSE, LIVERPOOL ZOOLOGICAL GARDENS.

WILLIAM SUGDEN and Son, Architects.

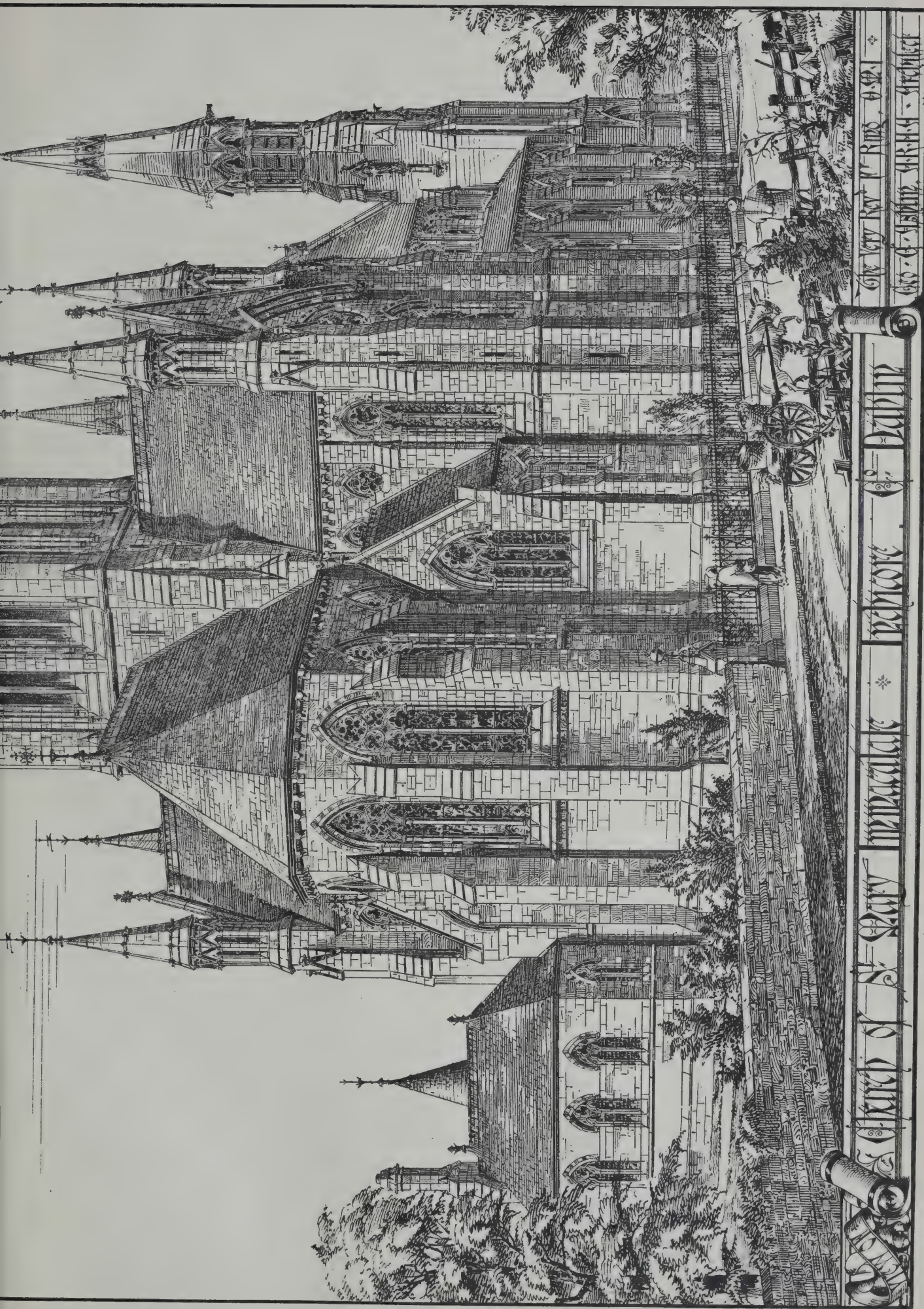












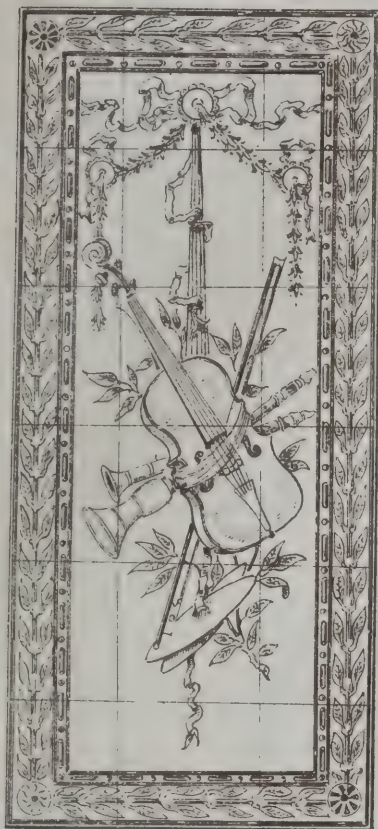
The Very Rev. F. Ring, O.S.A.  
Geo. C. Heslop, M.R.H.S. Architect

Church of St. Mary Immaculate  
Dublin

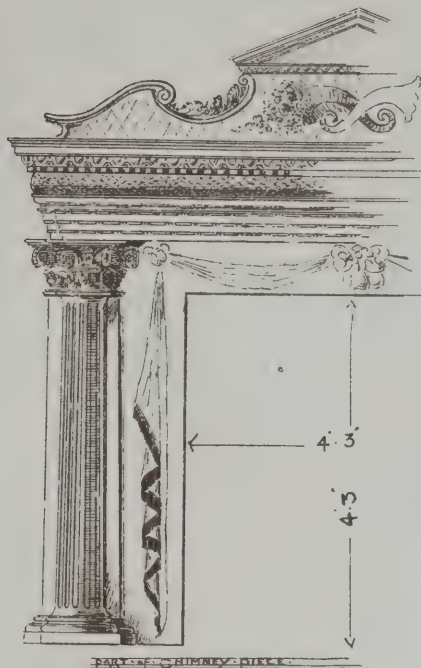








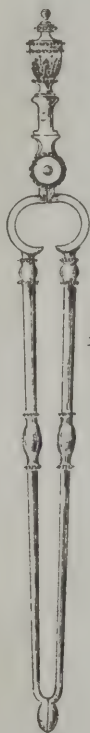
TILE SIDE



FACE OF CHIMNEY PIECE



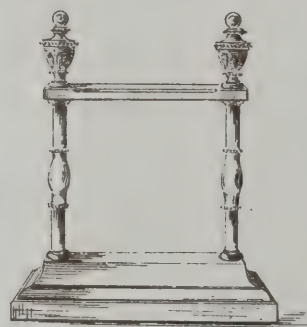
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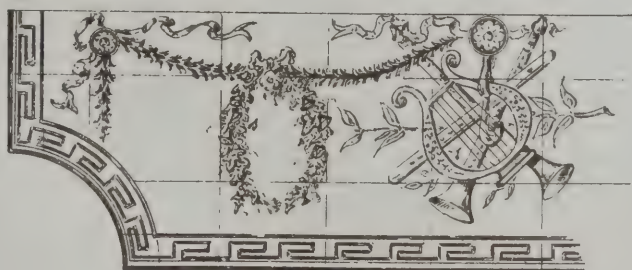
FIRE IRON



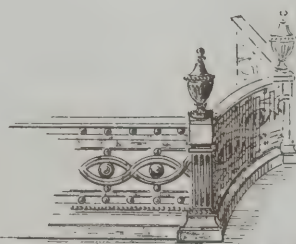
DOG GRATE



FENDER



PAINTED TILE HEARTH



FENDER

SELECTIONS BY

C. H. PRICE & R. G. ROBSON

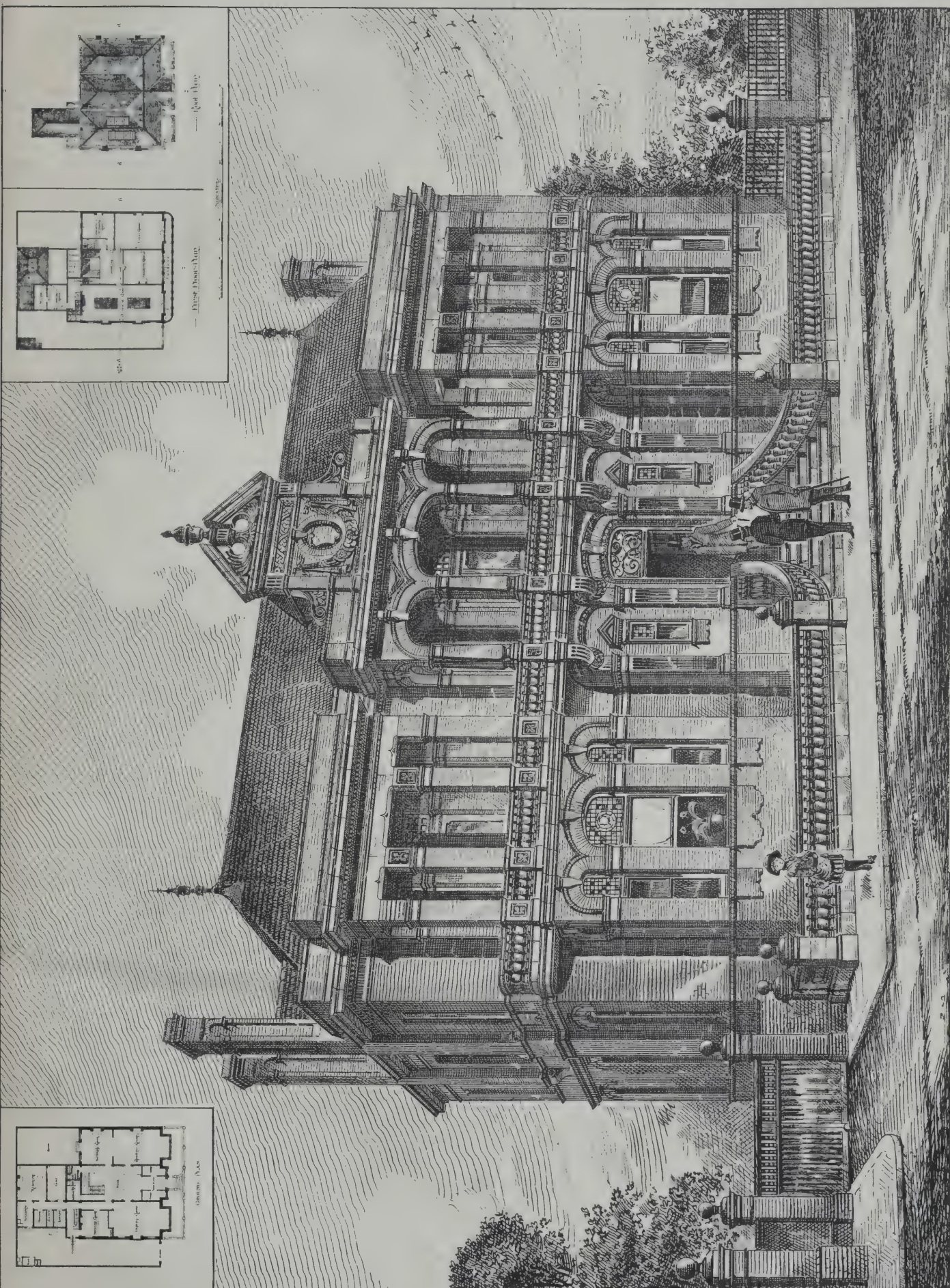
A FIREPLACE IN METAL, TILES, & MARBLE FOR SIR J. WHITTAKER ELLIS.

DESIGNED BY MESS<sup>rs</sup> PRICE & ROBSON & EXECUTED BY WELLS & CO. LIMITED









DESIGN FOR CLUB-HOUSE, BEDFORD.  
BY ARTHUR WELLS, ARCHITECT.







## ILLUSTRATIONS.

CHURCH OF ST. MARY IMMACULATE, INCHICORE, CO. DUBLIN.

THIS building was commenced some years ago, but only the nave and aisles have been built. It is now proposed to complete the design, as shown on the view, by the erection of the central tower, transepts, Lady Chapel, &c.

The interior dimensions of the nave and aisles are at present 100 feet by 52 feet, and the height of nave from floor to ridge 66 feet. The entire church will have a length of 156 feet 6 inches, and the width across transepts will be 68 feet. The height of the western towers, which are at present only built to the belfry level, will be 106 feet, and the total height of the central tower and spire will be 192 feet.

The materials for the present portion are granite for the facings, Stourton stone for the dressings, and polished Peterhead granite for the shafts of nave, arcade, and principal doorway. It is proposed to substitute limestone and Portland for the Stourton stone in the dressings of the remainder of the work.

The cost so far has been about 9,000*l.*, and that of the whole church will be about 24,000*l.*

The contractors for the portion already executed were Messrs. MEADE & SON, of Dublin, and the architect is Mr. G. C. ASHLIN, A.R.H.A., also of Dublin.

THE LIVERPOOL ZOOLOGICAL GARDENS.

WE give this week another illustration from the architect's water-colour drawings of the large detached monkey house in the new Liverpool Zoological Gardens. The building will be half-timbered—like the restaurant and concert hall—decorated externally with cement modelling, worked by hand whilst the material is in a green state. The roofs are red tiled, except the metal coverings of dormers, ventilators, &c., which will be of copper sheeting, and the verdant weather stains from these will gradually extend to the tiling and preserve the homogeneity of the roofing.

The monkey house is furnished on its south side with open iron cages, providing out-door exercise for the animals in suitable weather. The old seventeenth-century house shown in the view is Dig Lake Farmhouse, which it is intended to repair and maintain as a small museum of local antiquities. The celebrated well which gave its name to this township of Walton-on-the-Hill (well-town) is situated upon the site, and will be religiously conserved.

The works are now in progress, under the direction of the architects, Messrs. WILLIAM SUGDEN & SON, Leek. Mr. JOHN SHAW, of Bowdon, Cheshire, is carrying out the landscape gardening works; and amongst other contractors are the Everton Quarry Company; Mr. W. RAMMAGE, of 42 Old Broad Street; Messrs. WARD, of Limerick Foundry, Tipton; Mr. ROBERT HIRD, of Shipley, &c.

Every lover of art and nature must rejoice in the rescue of thirty goodly acres of territory in a district where "the demon of competitive commerce" and his minion the jerry-builder have had it largely their own way. One need not be a Democratic Federal like Mr. WILLIAM MORRIS to echo the eloquent words of the late Mr. J. H. CHAMBERLAIN:—

We have awoke to the fact that it is wicked and base and vile needlessly to dishonour and desolate the country. We have found out that our rivers have nobler uses to which they can be put than being made receptacles for sewage. We have determined that, ere it is too late, some part of England shall be free from the kind of curse that has turned the once lovely country between Birmingham and Wolverhampton into a loathsome desert. If you disagree in this opinion then at least renounce all hope of art, and spare yourselves trouble that can only end in disappointment. But the truth is that this change for good is real; and lovely as England yet is, the number of those who can feel that loveliness, who can enjoy it, and are thankful for it, is continually increasing.

FINGARRY, STIRLINGSHIRE.

THIS residence, which we illustrate, has been recently erected for Mr. JOHN HUNT on a beautiful site at the foot of the Campsie Hills. The situation commands a wide view of the surrounding country to the south and west, and the principal rooms have been arranged to take the fullest advantage of the prospect. The house is built of a warm-tinted sandstone, and roofed with sea-green slates with red ridges; and the internal fittings have had very careful atten-

tion, mantelpieces, cabinets, bookcases, &c., having been specially designed by the architect with very successful results. Stained glass has been freely used throughout the house, the staircase window being composed of subjects from the "Idylls of the King," and the upper lights of drawing-room windows containing a series of cherub figures illustrating outdoor sports, which we hope to publish on an early date. The windows of the other public rooms are similarly enriched.

The work has been carried out from the designs and under the superintendence of Mr. J. B. WILSON, A.R.I.B.A., of 112 Bath Street, Glasgow.

DESIGN FOR BEDFORD TOWN AND COUNTY CLUB HOUSE.

THIS design was submitted in the late competition by Mr. ARTHUR WELLS, of 27 Chancery Lane, London, Hastings, and Bedford. Two schemes were proposed by the author—one having the principal entrance in the front and the other at the side of the building. The arrangement of the scheme illustrated will be apparent from the plan. It was proposed to construct the walls of the best local kiln bricks, the facings to be of Henlow red bricks, and the dressings, where moulded bricks could not be used, to be of red terra-cotta. The balcony would be of Portland cement concrete, with light iron joists to form the core, and paved with encaustic tiles.

FIREPLACE, PAINTED TILES, ETC.

THE illustration shows a selection from some work which was designed by Mr. C. H. PRICE and Mr. R. G. RITSON for the mansion in Mayfair of Sir J. WHITTAKER ELLIS, the late Lord Mayor. The work was executed by WELLS & Co. (Limited), who have attained a high position for their productions in metal and other materials.

## THE ARCHITECTURAL ASSOCIATION.

THE seventh ordinary meeting of the Association was held on Friday evening, the 15th inst., Mr. Cole A. Adams, president, in the chair. The following gentlemen were elected members:—Messrs. B. F. Fletcher, H. S. Wood, G. Jones, W. F. Gargery, W. B. Dawson, J. D. M. Crawley, J. M. Watson, and F. W. Pether. Mr. Lewis H. Isaacs then read a paper, from which the following is taken:—

## The Local Government of the Metropolis; its Relation to and Effect on Street Architecture.

Having traced the mode and manner of election, and having arrived at some idea of the class and character of the elected, let us see what results on the street architecture of the metropolis the present form of municipal government has achieved. I propose to take some recent street improvements where the design of the façades of the new buildings has been under the control of the authorities as illustrations—and I submit fair illustrations—of this branch of my subject. Let us see what the ancient and renowned City of London has done in this particular. Some fourteen years ago a great metropolitan improvement was effected in the doing away with Holborn Hill and the construction of the Holborn Viaduct in its stead. Those of my hearers who are old enough to remember the quondam state of things—the steep inclination of the old roadway, with a gradient of 1 in 17 opposite St. Andrew's Church and the consequent terrible wear and tear of horseflesh—will agree with me in thinking it is little short of a marvel how we could have submitted to such an obstruction to vehicular traffic in our very midst for so long a period of time. Many people are of opinion, and I am myself amongst the number, that the remedy applied—a viaduct—was not the right one, and the suggestion of the late city architect, Mr. Bunning, that the valley should have been filled in bodily was, after all, the correct solution of the problem. At the time it was made it was decried as being primitive and unscientific, but experience has clearly demonstrated that what was predicted as the result of a viaduct has come about, namely, the severance of Holborn from Farringdon Street, notwithstanding the costly provision of new side streets, designed with the object of obviating this difficulty. We have in the Holborn Viaduct a fine handsome thoroughfare, 80 feet wide, and with just sufficient curve in its direction as to realise the truth of the saying, "the line of beauty is a curve." The street at the time of its opening bid fair to be an architectural success. It started well in this particular. The four buildings containing the staircases leading from the upper to the lower levels have certainly some claim to our praise, and if the bridge and the statues thereon are not all that could be desired, they can at least lay claim to originality, and are far removed from being commonplace.

The city architect, Mr. Horace Jones, commenced the commercial buildings on the Viaduct with the one occupied by the



well-known photographers, Messrs. Negretti & Zambra, at the corner of Charterhouse Street and Holborn Circus. This was speedily followed by the adjoining warehouse of Messrs. Fearon & Co., and subsequently the Union Bank of London took as a site for one of their branches a plot of land at the corner of Hatton Garden, Ely Place, and Holborn Circus. Now the façades of these buildings were all designed by Mr. Horace Jones, and all bear imprint of his well-known style. The salient features of these three buildings harmonise; the heights of roofs, chimney-stacks, and parapets coincide; the leading horizontal lines of the main cornices, window labels, and shop entablatures are continuous—in a word, there is nothing *bizarre*, but, on the contrary, there is harmony so far as these sections of the Circus are concerned. Londoners began to have some hope that there would be one street in the metropolis of which they might be reasonably proud, and at which foreigners might look without having to restrain their risible faculties. There were a few—a very few—other buildings on the Viaduct which helped to delude the Londoner into the belief that at least he might be proud of his one modern achievement in street improvement. The Imperial Hotel at the eastern end of the street—corner of the Old Bailey—from the design of Messrs. Teulon & Cronk, gave great dignity to the view of the Viaduct as approached from the east. Having regard to the height of the façade next the Old Bailey, as contrasted with its width, I think much credit is due to Messrs. Teulon & Cronk for their judicious treatment of that front. At the western end of the thoroughfare, where the Holborn Circus—a handsome plaza, 170 feet in width—serves as the point from which six different streets radiate, matters architectural did not progress so smoothly, for there appeared on the scene a mighty linen-draper who had to cover a section of the Circus. It might have been reasonably expected that he would have been content to follow the examples already set; and that this would have been required of him in Paris, Brussels, Vienna, or any of the great Continental cities, there cannot be the shadow of a doubt. But the linen-draper determined otherwise, and, doubtless for good reasons as far as his own business was concerned, he resolved to have his premises designed as dissimilar as possible from those already built. Now do not let it be understood that I wish in any way to detract from the merit of Messrs. Lockwood & Mawson's design for the block of buildings I am now referring to. It is one of very many edifices designed by them for commercial purposes, all of them redounding to their credit as architects, and admirably answering the purposes for which they were intended. I am only seeking to show, in pointing to this particular building, how, owing to the absence of proper control on the part of the municipal authorities, this very fine site became spoiled in an architectural point of view. Unity of design having thus been given up as hopeless, matters drifted, so to speak, from bad to worse. The City Bank took another section of the Circus; and, if I may be forgiven the pun, in order to show that there was no union of feeling between them and the Union Bank of London, they must needs have a different façade to their *vis-à-vis*, and so design No. 3 appeared.

In that portion of the Circus lying between Bartlett's Buildings and St. Andrew's Street we have a fourth design, and this unquestionably may be pronounced as the most wretched of the lot. Words, indeed, almost fail to convey the indignation that is properly felt by every educated person in seeing the mode of treatment adopted in uniting the elevation of the side building with that of the front.

I have had prepared for the purposes of this paper photographs showing the various sections of the Holborn Viaduct at present covered with buildings. I regret that it was not possible to take the whole in one view, so that my criticism might have been more easily followed. I have also to express my regret that, owing to the very cloudy weather which prevailed when the views were taken, they are not so sharp and crisp as I should have liked them to be; but, with these drawbacks, they will still serve in some degree to demonstrate how this unquestionably fine site has been murdered, so far as its architectural *ensemble* is concerned.

The remaining section of the Circus—viz. the site at the western corner of Hatton Garden and Holborn—is just about to be covered with a new building. The land in this instance belongs to a woollen-draper, who, doubtless with the view of asserting his independence and of showing that he has as much right to be uncontrolled in the design of his building as his *vis-à-vis* the linen-draper, will sufficiently mark his property and the business carried on therein. To crown all, some one desired to present a piece of sculpture to be placed in the centre of the Circus, and the offer having been accepted by the Corporation, an equestrian statue of the late Prince Consort was decided upon. The Prince is represented in the uniform of a general of the British army, and in the act of acknowledging a military salute. Now, if there was one thing which the late Prince Consort was less than anything else it was a soldier. Neither was he much of a horseman. Yet, forsooth, an equestrian statue having been determined upon, he must be presented to the British public in the guise in which he least often appeared to them. The Prince was a savant and a scholar, and if it were intended to do honour to his memory he should have been sculptured in that character which had most

contributed to familiarise and endear him to the people amongst whom he lived.

As regards the Viaduct proper, the cleared building sites, after lying some time unlet, were sold *en bloc* to a land company. I do not know why it should be, but, nevertheless, it invariably happens that a land company vulgarise everything they touch. Holborn Viaduct was no exception to the rule, for on obtaining possession of the empty sites the land company began to build, if not by the mile at least by the furlong, and with such poor results architecturally that one of their tenants, in order to make his building more pronounced than the original design had left it, conceived the happy idea of painting over the entire front—brick and stone alike—giving the brickwork a nice fiery red tone, and carefully picking in the joints with white lead. I venture to think that anything more hideous could not be found in the unfashionable locality of the New Cut; yet this glaring outrage on good taste has to be viewed daily by thousands of the leading citizens of London.

To conclude, therefore, my remarks on the architectural treatment which this splendid metropolitan thoroughfare has received at the hands of the authorities, I would say that, apart from the extra width of the street, there is little or no improvement over the results obtained by the late Sir Robert Smirke, when called upon to design and lay out two other streets in the City of London, viz. Moorgate Street and King William Street,

(To be continued.)

### THE CONSERVATION OF SIR JOSHUA REYNOLDS'S PICTURES.

THE following is the second part of Mr. J. C. Robinson's paper on Sir Joshua Reynolds's pictures. The first part appeared in *The Architect* on the 2nd inst. :—

Pictures are always at their best when they first leave the artist's easel, and it may be taken for granted that the mellowing tones which time has superadded to nearly all ancient pictures, were neither foreseen nor specially desired by the painters themselves. There is, nevertheless, often a great imaginative charm in this antique *atramentum*, which gathers on the surface of a picture like the patina upon a bronze. Moreover, as "charity covereth a multitude of sins," so this darkling envelope, when not in excess, often serves a useful purpose in mitigating or concealing innumerable evidences of alteration and decay in the work itself. It is the aim, then, of all judicious picture restorers, to retain to a greater or less extent this external crust of dark and discoloured varnish, to prevent its undue accumulation, but never to be obliged to scour it away altogether. Whenever this has been, unfortunately, done, even although the original surface of the picture may not have been in any way injured in the process, a more or less crude and discordant effect is sure to be produced. If it should be asked why this should be, seeing that the picture has merely lost a polluting stratum of superjacent dirt, and that the actual work of the artist has been again revealed in its pristine state, the answer is, that this is not so, for that in the course of time innumerable internal changes have taken place in the artist's work, whereby alone its original effect has been greatly altered and distorted. In nine cases out of ten, indeed, just as the young man of twenty would be astonished if he could see his own presentment at seventy, so would the painter marvel at the transformations of his own work, the inevitable result of natural causes, if he could see it again a century or two afterwards. Some colours, for instance, fade and wane away, while other tints deepen in force and intensity; vehicles darken and become heavy and opaque—in short, there is life or rather death always in operation in pictures, as in everything else—chemical action and reaction, in fact blind forces following their own laws and taking no account of man's intentions, when he pressed them into his service. Thus, in the Mrs. Pelham portrait alluded to in my former letter, the dark tints, even the dark sprigs or flowers on the dress, have undoubtedly become very much darker than they were when they were first painted, while the white drapery remains as white and brilliant as ever. From this cause alone, now that the toned varnish has been produced, a painfully raw and spotty effect has been produced.

It will be evident, then, that this superadded crust of old discoloured varnish, besides the mechanical protection to pictures which it affords, has positive use and value in other not less important respects; it is, then, all essential to be able to perfectly regulate the condition of this crust, and in this consists nine-tenths of the science of the picture-cleaner. Now, pure mastic, which, as I have before said, is the only varnish which ought ever to be applied to oil pictures, in process of time also acquires a more or less warm golden tone, but it never becomes dark brown and opaque or obdurately tough like the oil varnishes. The Mrs. Pelham picture, therefore, if again covered with a sufficient body of mastic varnish, will probably in the course of years gradually acquire again much of the mellow, softening tone which it at present so obviously lacks.

There is, again, another invaluable property peculiar to mastic



varnish; it is that it can be removed with the utmost facility by an extremely safe and simple, yet not the less very remarkable, process. Moreover, by this method it is possible to take away just as much as is required, either all over the surface or in any part of the picture only—in other words, the denuding process can be carried to any desired extent, and stopped short at any point with absolute ease and certainty. This is by simple friction, for mastic varnish when quite dry and hard, possesses the singular property of rolling or chafing up into a fine dust or powder, by mere gentle rubbing with the soft tip of the finger. But oil varnishes cannot be treated in this manner. This invaluable property of mastic is immediately destroyed by the admixture of even a very small modicum of oil, and when the dose is considerable, chafing with the finger has no more effect on the bright, dry surface of the varnish than it would have on that of a china plate or a mahogany table. There is, however, another way of removing varnishes, applicable more or less to all kinds and admixtures. This is by means of solvents, usually alcohol or spirits of wine; but this process, which, unfortunately, is far more expeditious than the former method, is just as dangerous and uncertain in its application as the other is safe and simple. In the hands of ignorant practitioners, indeed, this has at all times been the one paramount cause of the deterioration and destruction of innumerable fine pictures.

Broadly speaking, this process never ought to be resorted to when it is practicable to remove varnish by the former method, and certainly never by any but a thoroughly experienced manipulator.

Another operation to which it is often necessary to subject pictures is what is called back-lining, and here again Sir Joshua Reynolds's pictures are especially difficult to deal with. This process is resorted to when the painted film of the picture rises up into blisters or cracks, and becomes loosened from the canvas. It is performed as follows:—The face of the picture is, in the first place, protected with several sheets of paper pasted on it; the canvas is then cut off the stretching frame, and placed with its covered face downwards on a smooth wooden table; a new canvas is then glued or pasted on to the back of the old one, and made to adhere very strongly by pressure in all parts with a heated iron. By this heat and pressure the blisters and loose portions of the paint are flattened down and made to adhere again to the canvas. The picture thus fortified is then again strained upon a stretcher, and the sheets of paper pasted in front are washed off with warm water and a sponge. But Sir Joshua's pictures are usually so thickly painted, their surface texture so rugose, and the sharp loaded touches stand up in such high relief, that the heat and pressure required to bring down the cracks and blisters are liable at the same time to flatten these loaded touches, or even—especially when wax has entered into the composition of the bituminous pigments—to actually melt them and cause portions of the picture to run into blurred and formless masses. There are, then, numerous cases in which back-lining is the obvious remedy for evils which have supervened upon Sir Joshua's pictures, but where for these reasons it is impossible to apply the remedy with safety. In short, it is scarcely too much to say that they should never be either back-lined or entirely "stripped"—that is, cleaned from all the varnish put upon them. In the majority of cases the injuries they have suffered should be regarded as bygone evils, irrevocable in their nature, to be atoned for or kept from further development only by increased and more rational care in future.

There is yet one other technical matter to be noticed—this is as to the action of solvents—that is, alcohol or spirits of wine—both on the covering varnishes and on the denuded surface of pictures. Broadly speaking, spirits of wine dissolve the super-added varnishes almost instantaneously, if these are of a purely resinous nature, and as the delicate final painting and transparent glazings of the artist are usually executed with more or less resinous media, these also may be blurred and defaced, or even utterly scoured away, in the briefest instant even, by the ignorant or unskilful cleaner. Unhappily, this is still of every-day occurrence, and woful instances are before our eyes in the exhibitions now open at the Grosvenor Gallery and Burlington House.

Let us now turn to some of these examples. Perhaps the most flagrant cases are to be seen at the Royal Academy. The "Old Masters" Exhibition this year, in fact, contains an unusual proportion of damaged and "restored" pictures. Two capital works of Sir Joshua Reynolds are unluckily among the most obvious instances. The first of these is the beautiful portrait of *Mrs. Sheridan as St. Cecilia*, No. 209. Here the head of the lady has been cruelly flayed, nearly all the delicate surface modellings, originally executed in transparent glazing colours, have been ruthlessly scoured off. The head is now, comparatively speaking, a flat and formless white spot, quite out of keeping with the rest of the picture; the white drapery, moreover, has been flattened down by a partial lining process, and fatally blurred by solvents. The picture had doubtless been allowed to lapse into a degraded condition, and its "restoration" would have probably sorely taxed the skill and patience of even the most accomplished "picture doctor." As it is, in an evil moment this famous work must have fallen into the hands of an ignorant and reckless quack. Worse than this, however, is No. 18 (Royal Academy), *Hope Nursing Love*. This

picture has been completely transformed—practically ruined—mainly by improper and unskilful back-lining, and apparently by an empirical method of "reviving" the flattened surface by solvents. The picture obviously looks as if it had been half-melted or dissolved; and so, in fact, it has. All the sharp and brilliant touches of the master have disappeared; they seem, indeed, to have partly sunk into and become absorbed in the thick, semi-fluid impasto of the picture, and partly to have been removed by abrasion. The result, in any case, is that the work has been reduced to a tame and monotonous dead level.

It is a thankless task to point out such instances as these, and sympathy with the unfortunate owners alone indisposes me to dwell upon them. One other flagrant case, however, I cannot pass over. This is No. 11 (at the Grosvenor Gallery), the portrait of *Mrs. Nesbitt as Circe*. Here, again, is another completely defaced work—the pale ghost of a noble picture. Truly in this case it is the swine which have transformed the enchantress! This picture has been simply flayed, except perhaps in some portions of the dark background in the upper part; the surface glazings and much, indeed, of the solid painting of the picture have been cleared off bodily by the reckless application of solvents. The work, nevertheless, must previously from all appearance have been substantially in a sound and healthy condition. I shall now only call attention to one other picture, and this not that it has yet suffered irremediable injury, but simply because it is on the road to ruin, and that a friendly hand might rescue and give it renewed life and beauty. This is No. 123 (Grosvenor Gallery), the portrait of Lady Caroline Keppel. I stated in the outset of my former letter that a sufficient "body" of varnish is absolutely necessary to protect the surface of pictures, particularly in the changeable climate of England. But all varnishes are liable to decay and alteration in the lapse of time, and to require renewal. Thus, from the poverty or insufficiency of the protecting medium alone, serious evils may ensue. Now, the charming portrait in question is in this particular condition. The picture appears to have received, probably not long after it was painted, one or two thin coats only of oil varnish, and to have ever since remained practically untouched. This covering has somewhat darkened and changed colour, but not to any serious extent. It is now, however, rapidly decaying and becoming loose and friable, and almost ready to drop off the surface. The simple remedy for this is to give the picture a sound coating of pure mastic, simply applied over the ancient crust as it stands; nothing else is required. This could easily be done during the continuance of the present exhibition even. This delightful work would then not only be rescued from imminent degradation and decay, but the resultant effect would be quite surprising, for the picture would doubtless again "bear out" in almost its pristine force and brilliancy.

It will now perhaps be asked, "But what is to be done with pictures covered with darkening oil varnish, but which for the reasons stated it is inadvisable to try to remove?" The simple answer is, Let them alone. But, curiously enough, there is a possibility, if not of completely remedying this ever-increasing darkness, yet to some extent of arresting its progress. It is a well-known property of drying oils, especially of linseed, to carbonise or increase in depth of colour most rapidly in the dark, and, *vice versa*, a bleaching process takes place by exposure to the light. Generally speaking, then, although the direct rays of the sun ought never to be allowed to fall on oil pictures, on the other hand they should never be hung in very dark situations. Now, if any picture obscured by oil varnish, and which may have been previously hung in a position comparatively sombre, is removed to a more lightsome situation, the tendency in the oil varnish to become increasingly dark will be counteracted, and probably the work may even to some extent recover some of its pristine lightness. A useful hint to possessors of pictures may be gathered from this brief intimation. It is this: rooms in which pictures are hung should never be left for months together with closed shutters, as is sometimes the case in houses shut up for the season; nor should the careful housewife ever be allowed to cover them up with calico or brown holland, and this even more for the reason now given than for the risk of fire so induced, by which so many lamentable catastrophes have been caused. There now remains only one more point to notice before bringing to a close these unavoidably prolix observations. It is the practice of putting pictures under glass. I am glad to find from the number of instances seen in the present exhibition that this most useful practice is on the increase. Nothing can be better or more conducive to the proper preservation of pictures than this simple plan. There are, it is true, some practical drawbacks to its universal adoption, and before concluding I shall notice the most obvious and perhaps the only really cogent objection. But covering the face of the picture with glass is only a half measure; the back of the canvas requires protection from accumulations of dust and dirt, and the access of damp air, almost as much as the painted surface. The right course is also to cover the back with some material impervious to moisture, such as American or indiarubber cloth, stretched tight across and nailed along the edge to the frame of the picture.

It is scarcely necessary to enumerate the advantages accruing from the protection of pictures by glass; they are for the most



part obvious enough. One only, however, which may not be generally perceived is this—this plan almost entirely obviates the necessity for the periodical rubbing up and cleaning the surface of pictures with the silk handkerchief or cotton wool, inasmuch as the protecting glass and not the painted surface of the picture receives the rapidly accumulating deposit of dust and dirt. Now, the very act of frequently rubbing up the surface of pictures is in itself prejudicial, especially to those painted on canvas. It is, indeed, one of the causes of cracking and the loosening of the painted film, which is of all things most to be avoided. Finally, in the case of pictures of comparatively small dimensions, I can see no practical reasons worth a moment's consideration against putting them under glass, and I can call to mind only one really valid objection against treating works of large size in the same manner; it is this, that the greatly increased weight caused by the thick sheet of glass renders it comparatively difficult to move such works with the desired facility. This, indeed, in view of possible alarm of fire, is a matter to be considered; it is clear, however, this is not an insuperable difficulty.

### WESLEYAN CHAPEL BUILDING.

THE twenty-ninth annual report of the Wesleyan Methodist Chapel Committee, whose headquarters are in Manchester, has been issued. The management of chapel affairs is divided into two departments—building department and relief department. Under the building department there are two classes of cases—erecting and enlargements sanctioned during the year, and erections completed which had been sanctioned in previous years. The following enlargements and erections have been sanctioned:—113 chapels, at an estimated cost of 173,354*l.*; seven ministers' houses, at an estimated cost of 6,858*l.*; 24 schoolrooms, at an estimated cost of 11,110*l.*; 109 alterations and enlargements, at an estimated cost of 57,418*l.*; 94 modifications of cases previously sanctioned, viz., 76 chapels, additional outlay, 29,953*l.*; 17 alterations and enlargements, additional outlay, 4,457*l.*; 39 organs, 9,011*l.*—making together 386 cases, at an estimated outlay of 292,174*l.* The number of cases sanctioned this year is seventeen more than last year, and the proposed expenditure is 41,743*l.* more than the outlay then sanctioned. The average cost for sitting in the intended new chapels is estimated to be just over 5*l.* Of the proposed new chapels, 55, to accommodate 14,306 hearers, are to be erected in places where there were previously no Wesleyan Methodist places of worship; and 58, estimated to provide accommodation for 20,178 hearers, are to supersede former erections reported as having provided 12,553 sittings. The total additional accommodation in new chapels and enlargements will be 24,793 sittings. The temporary debt sanctioned is 32,854*l.*, being 18 per cent. on the outlay.

### THE ROYAL SCOTTISH ACADEMY.

THE annual dinner was given by the President and Council of the Royal Scottish Academy on the 15th, Sir William Fettes Douglas, president, occupied the chair.

Lord Balfour, of Burleigh, proposed the toast of the evening—"The Royal Scottish Academy." After referring to the hospitality they had received, and to the admirable works of art they had had the opportunity of witnessing, he said that not from his own opinion, but by having gathered the opinions of those best able to judge, the present exhibition was fit to be compared with any of those which had preceded it. They lived in times when they might congratulate themselves upon the spread of real artistic knowledge among the people at large. They must all be gratified at that, and he was not wrong in saying that a good part of the spread of that knowledge was due to the position which the Royal Academy had taken up in Scotland. A great deal was being done by art to elevate the tastes of the people, to show them that art was not a thing for the rich alone, but for all classes, and that by taking it into their dwellings they made their dwellings homes, and not merely places to live in. In London there was a National Gallery, of which the nation might well be proud; but the less said about what had been done for art in Scotland the better. He hoped, however, there were better times in store for Scotland, and that more justice would be done to her in such matters.

Sir Wm. Fettes Douglas, in replying, said that the Royal Scottish Academy dated from nearly sixty years ago, and was instituted out of the external necessities of art. But although sixty years ago art was in a very necessitous state in Scotland, now art was a necessity of itself in every walk of life and in every circle of society. He believed Lord Balfour was not far wrong in saying that art in Scotland owed much to the Academy. He thought all the schools in the world would not do so much for aspiring artists as the sight of good pictures always before them; and if the Academy had money to spare he would strongly recommend it not to spend it on more schools of art, but in the purchase of more good pictures. He then referred to the spread of artistic taste in home life, and said that from engravings and

chromo-lithographs people, as their ability and taste improved, aimed at securing better art productions. Lord Balfour had mentioned the National Galleries of England and Scotland. That was a subject on which he could enlarge with considerable emphasis, although he was not quite sure whether he was at liberty to say much about it. There was no doubt, however, that in Scotland they had been infamously treated. The National Gallery in England had—and very properly—20,000*l.* or 25,000*l.* a year, and Ireland also got over 3,000*l.* and had its Gallery buildings erected for it, while in Scotland not a single sixpence of national money was spent upon art. Even the cost of the National Gallery Buildings themselves was taken out of a purely Scottish fund. In conclusion, the President referred to the success of the Academy scholars of the present time, and prophesied, amid cries of "No," that the painters of the future would be infinitely better men than those of the present or past.

### EDINBURGH CASTLE.

ON Saturday last the members of the Edinburgh Architectural Association paid a visit to the Castle, with the view of examining some of the architectural features of the building. The party, which was a numerous one, met on the Esplanade, and was afterwards conducted through the more interesting portions of the Castle buildings by Major Gore-Booth.

Mr. David M'Gibbon, president of the Association, read a paper on the Castle in Queen Mary's Room. After referring to a few prominent historical events associated with the early history of the Castle, he said that what the appearance of the Castle was in these early times they had no means of knowing, as it was entirely demolished by Bruce in pursuance of his usual policy of leaving no place of strength standing which could form a point of support to the enemy. The only building of the early period which appeared to have escaped was the small chapel in the Norman style called St. Margaret's Chapel, which was probably founded by David I., the great church-builder, in memory of the sainted queen; at least it belonged to the latter half of the twelfth century. From the natural configuration of the gate, the general disposition of the various parts must have always been much the same. The entrance would always be by the same narrow pass by which the Castle was now approached. This would lead to the outer or lower court, where the governor's house, the barracks, armoury, &c., were now situated, while the inner court would occupy the highest point, where the palace yard now was, the only access to which seemed to have been by a flight of steps in the face of the rock. The Castle was rebuilt by Edward III. in 1344. It was most probable that the buildings would be erected in the same style as the numerous fortresses built by the Edwards in Wales—viz. a great enclosing wall with towers at intervals. There would be comparatively slight erections within the *enciente* for the garrison, but no large building for a residence. When David II. returned from his captivity he made the Castle his chief residence. He added greatly to its fortifications, and built a large keep, called David's Tower, which occupied a position above where the Half-Moon Battery now stands, and which remained till the siege by Drury with the English troops in 1573. David's Tower was evidently (1668–71) the keep or chief building in the Castle. It was 60 feet in height, and contained a lords' hall and a new court kitchen, besides chambers and lofts. After the town of Edinburgh was burned by the Duke of Lancaster (1385)—the Castle having resisted the siege—Robert II. gave permission to the townspeople to build houses for security within the Castle walls, which must therefore have been of considerable extent. The Jameses resided chiefly at Edinburgh Castle, and it would appear that they considerably extended the accommodation by building a hall and royal apartments at the south-east corner of the Castle Rock. This building was well seen from the Esplanade, and it might be well to observe the corbels which marked the former height of its parapet. The top storey was evidently a late addition. Considerable additions were made to these royal apartments at various times, especially during the reigns of Queen Mary and James VI., some of which still remained. It was in Mary's time that the Castle sustained the greatest injury (when it was held for the Queen by Kirkcaldy of Grange), and when almost all traces of its earlier form were obliterated. It was from the date of the rebuilding of the Castle by the Regent Morton after the siege that the existing modern appearance of the Castle began. Commencing with the Esplanade, it should be kept in mind that its present extended appearance was of very modern date, having been formed with the rubbish removed from the site of the Royal Exchange when it was built in 1753. Before the siege of 1573, this ground was at the level of the dry ditch, and was occupied with a triangular court bounded by a wall called the "spur." This was removed in 1649. After its removal, and before the formation of the Esplanade, the Castle was approached by a narrow raised roadway and a drawbridge at the gateway. The Half-Moon Battery was the chief feature erected by the Regent Morton after the surrender of the Castle. David's Tower was supposed to have stood about the centre of it, and the remains of one of the old



smaller towers and part of the curtain wall might be traced embedded in the masonry of the present building. The arched gateway was built by Regent Morton below the site of the Constable's Tower. Formerly it had a flat crenellated roof for artillery—the present top storey being a modern addition. The mouldings quite corresponded with those of the period (1574) at Craigmillar, &c. In the entablature alternating with the triglyphs might be seen the Heart and Star of the Douglas. On passing through the archway a flight of steps was seen on the left, indicating where the original access to the upper platform by the Constable's Tower probably was. Passing the Argyle Battery, they had before them the Governor's house, built in Queen Anne's time, and on the right a passage flanked with two quaint vases leading to the armoury and stores. These plain buildings were of the eighteenth century. The great block containing the soldiers' barracks was built at the beginning of this century. They now ascended to the upper platform, on which the principal parts of the Castle had always stood. Commencing at the quadrangle, they found the oldest portions of the south-east corner immediately over the most precipitous parts of the rock. These consisted of the private apartments of the palace already referred to as belonging originally to the fifteenth century. Dr. Chambers thought they could trace the remains of an ancient tower at the south-east angle, which might have been the primitive palace of Malcolm Canmore; but as the Castle was entirely dilapidated in the time of Bruce, they could not fix on an earlier date than that of the Jameses for the building of any portion of this palace. The width of the platform of the courtyard seemed to have been extended at an early date by building extensive vaults to the southwards, in some places two storeys in height, so as to raise the pavement of the courtyard to near the top of the wall of the *enciente*. Above part of these vaults the Great Hall, called also the Parliament House, had been erected, apparently at a subsequent date, for it should be noticed that the hall did not occupy the full width of the vaults. The hall was 84 feet long by 33 feet wide, and seemed to have been originally lighted by large mullioned windows on the south side, some traces of which still remained, and there were probably similar windows on the north side, but the building had been so much altered that it was now scarcely possible to recall any of its original features. The gabled crowsteps which still remained on the west gable were evidently original. The roof of the hall was old. Of the corbels which supported the ends of the principal rafters only one was now visible—in the staircase. It was of fine Renaissance design, and of a style very rare in Scotland. The corbel and the gabled crowsteps were almost the only features in the building from which an idea of its date might be formed. Judging from these and the parapet on both sides, the date of this could scarcely be earlier than the reign of James V. It seemed probable that the roof was of the same period. This must have been a magnificent hall of a similar type to those of other royal palaces at Linlithgow and Stirling; and it was earnestly to be hoped that the meritorious and enthusiastic endeavours of Major Gore-Booth to have it so far as possible restored and fitted up as an armoury and military museum might be crowned with success. According to the usual arrangement of such palaces, the hall communicated with the princes' private apartments at one end—in this case the east end; but these had also been so much altered that it was impossible to distinguish the original arrangements. The vaults beneath this range were said to have been used as State prisons, one being called Argyll's dungeon. At all events, there was no doubt that they were employed for the purpose of confining the French prisoners at the beginning of this century. Proceeding to the east wing of the palace, here were the apartments occupied by Queen Mary, and the room in which King James VI. was born. This wing was renovated in Queen Mary's time. The entrance door and interior fittings were evidently of her date, and over the door there is a monogram of M. and H., for Mary and Henry Darnley, besides a shield higher up containing the royal arms. The two corbelled projections opposite the eastern windows of this division were noteworthy. It was said that they supported balconies to which access could be got from the windows; but it seemed to be more probable that they were intended to support oriel windows such as that in the private apartments at Linlithgow. The northern part of this wing was in fair preservation, and bore the date 1615, with which date its style corresponded, being somewhat similar to that of Heriot's Hospital and the old Parliament House. The mouldings and their details had not escaped from the effects of the subsequent sieges by Cromwell and others to which the Castle was subjected; but as none of these were of a very serious character, the buildings erected after the date of the Regent Morton had suffered more from violence from within than from without. This block contained the regalia-room, which appeared to have been constructed as a strong-room for keeping these insignia in safety. On the north side of the quadrangle stood originally the Garrison Church, founded as early as the time of David I., and afterwards rebuilt, shortly before 1366, by David II. The buildings on the west side of the courtyard were evidently very modern—probably about the beginning of the last century. Passing to the northern portion of the upper platform, here the little chapel of St. Margaret has stood uninjured all the other shocks and changes which had so

altered the other features of the Castle. But it had suffered severely from internal alterations. It has now, however, been restored to its original shape and use, and is certainly one of the most unique and interesting specimens of Norman work in Scotland.

### THE BUILDING OF LONDON HOUSES.

THE first of a course of three Cantor Lectures was delivered by Mr. R. W. Edis, F.S.A., on Monday evening, at the house of the Society of Arts. The subject selected was the "Building of London Houses." Mr. Edis began by pointing out the hopelessness of any real improvement in the building of London houses until effective legislation brought the "speculative builder" under such control and supervision that he should be obliged to give up the scamping work, the defective materials, and the utter disregard of all sanitary requirements which now characterise 99 per cent. not merely of existing structures, but of the enormous additions which annually take place. It was true that within the last few months the Metropolitan Board of Works had seen the necessity of supervising plans; but their supervision only applied to buildings carried out on their own property. If Government could not take up the matter, surely it would answer the purpose of a private company to undertake the work of inspection on a large scale. It had been his lot to examine many houses of the so-called better class of speculative buildings. In these the unfortunate tenant saw the rooms carefully painted and papered, and only found out the wretched whitened sepulchre he had taken after the agreement was signed. Probably only one per cent. of London houses were erected under a competent architect. Another fertile cause of the existing undesirable state of things is the grasping propensities of ground landlords and the leasehold system, which led to the erection of houses on unsound principles, and of materials wholly unsuited to the London atmosphere, and it was sincerely to be hoped that some law would soon be passed making it compulsory on ground landlords to enfranchise building owners on equitable terms. The health and comfort of the inmates should be first considerations in the internal plan of a house, and to these the external elevation should be made subservient by insuring the maximum of light and air. These desiderata, as well as agreeable outside appearance, would be secured by projecting octagonal oriel and bay windows and gables cutting up the sky-line, as in the streets of many of the old towns of Belgium and Germany. As to materials, cement and stucco might be accepted as merely screening bad work, and for new houses the best materials were glazed bricks, which were impervious to moisture, and the extra first cost was more than repaid by the extra light, warmth, and purity of air which they insure. Good red bricks, with plenty of red terra-cotta and glazed faience, put together in the Elizabethan style, was infinitely more charming and more suitable to London wants than the best stone (which did not stand the smoke) worked up into Classic, Gothic, or the Italian palatial style. One thing was certain, that rows of houses which were weak imitations of the Rue de Rivoli or l'Avenue de l'Opéra in Paris were not wanted in the metropolis.

### THE INTERNATIONAL HEALTH EXHIBITION.

PREPARATIONS for the holding of this exhibition are proceeding rapidly. The Board of Trade have certified that the exhibition is an international exhibition, and exhibitors thereat will accordingly participate in the privileges accorded by the Patents, Designs and Trade Marks Act of 1883. The officers of Her Majesty's Customs have also announced that the Lords of the Treasury have consented to the buildings being considered as a bonded warehouse during the continuance of the exhibition, as was the case at the late Fisheries Exhibition.

The general committee now numbers nearly four hundred members, and from these seventeen sub-committees have been formed. These have all been doing valuable work in advising the executive council as to the nature of objects which it is desirable should be fully illustrated, in obtaining the co-operation of many persons of eminence in the various branches on which the exhibition will treat, and in supervising the applications for space.

The allotment of space, which has been largely applied for, is being rapidly proceeded with, and applicants will soon be informed of the decision of the executive council with regard to their applications. Though it is impossible to state, at this early stage of the preparations, the names of exhibitors, we are however in a position to say that many well-known London and provincial firms—whose very names are a guarantee that their exhibits will be prepared in a first-rate manner—have announced their desire to take part.

In response to a request made by His Royal Highness the Prince of Wales, president of the exhibition, the eight water companies of London have resolved to exhibit, in a pavilion which is being erected for them, their appliances for the supply, filtration, &c., of water, together with diagrams showing the various processes and localities; and a powerful sub-committee



under the active chairmanship of Colonel Sir Francis Bolton, has been formed to carry out this branch of the exhibition. The water companies have also determined to put up in the grounds a large fountain, which will be illuminated at night by electricity. This fountain of light will, it is anticipated, materially add to the beauty of the illumination of the gardens.

It is impossible as yet to give any definite information with regard to foreign countries, but so far as one can judge at present, Belgium, China, and India will be the best represented. A Royal Commission has been appointed in Belgium, and the Consul-General in London is their active representative here. To China has been allotted the space which it occupied last year at the Fisheries Exhibition, and a Chinese tea garden, restaurant, and shop will not be the least interesting objects in the exhibition. India is to be adjacent to China, and strenuous exertions are being made to secure the united action of many of the principal tea-planters in India, so as to insure a good and representative show of the Indian tea-growing industry.

## BRONZE CASTING IN BELGIUM.

THE following technical description of the method of casting bronze "*à la cire perdue*," as carried on by the *Compagnie des Bronzes* at Brussels, has been prepared by Sir J. Savile Lumley.

Supposing the work to be reproduced to be the portrait bust of a man with curly locks and a long flowing beard, such a head would not be easy to cast by the ordinary process owing to the difficulty of conveying the liquid bronze into the cavities of the curls and the interstices of the beard, but this is easily overcome when the bust is cast by the wax process. The different operations to be carried out are as follows:—1. The production of the model in plaster or terra-cotta by the artist sculptor. 2. Its reproduction in wax by the founder. 3. The repairing and retouching of the wax bust by the artist sculptor. 4. The preparation for casting the bust before forming the mould and cope. 5. The formation of the mould. 6. Firing. 7. Casting. 8. Finishing and decorating the bronze bust.

### 1. The Model.

The bust produced by the sculptor, which may be in terra-cotta or plaster, finished as far as the artist thinks advisable, is handed over to the founder.

### 2. The Reproduction in Wax.

This requires three distinct operations:—A. The formation of a piece-mould; B. The reproduction of the bust in wax C. Running the core.

#### A.—The Formation of a Piece-Mould.

After having examined the bust so as to be thoroughly acquainted with its difficulties, the workman proceeds to cut off with a twisted wire the projecting portions of the beard and the hair which, from the cavities of the locks and curls, would present difficulties for casting. The parts thus removed are afterwards easily replaced. The bust is now reduced to a very simple instead of the complicated form it at first presented. The plaster mould is then made in the ordinary way: the bust being laid on a table, face upwards, is fixed in that position by lumps of modelling clay so that one half of the thickness of the bust is completely covered, the remaining half presenting the appearance of a figure floating on its back in water. The workman then begins to make the pieces of the mould: taking the liquid plaster, which is of the consistency of thick cream, he forms a cube of 5 centim. high, and the same length and width, which he squares as soon as the plaster begins to harden; with this cube of plaster he covers a first portion of the surface of the bust; close to this first cube a second is formed, and so on till the whole bust is covered with an irregular mosaic of plaster cubes, care being taken to prevent them from adhering to each other, or to the bust by the application of a strong solution of soap. The surface of these cubes, after being well wetted with this solution, is covered over with a very thick coating of plaster, which is called the cope, the place of each cube having been previously marked; the first half of the piece-mould is now complete. The moulder then turns the bust with the face down on to the table, fixing it as before, and proceeds to cover the back in the same way with cubes of plaster, so that when this second half is also covered with a thick plaster cope, a complete mould is formed in two halves. The great art of the moulder is to make the piece-moulds at the same time simple and solid, and fitting so closely together as to leave the least possible trace of the joints on the plaster cast produced from it; care must also be taken that in handling the mould none of the small pieces should detach themselves from it.

The mould being completed, it is opened, that is to say, the two plaster copes are separated, the bust which is intact is taken out, leaving a complete mould in which other busts can be cast just as bullets are cast in a bullet-mould.

The next operation is the reproduction of a bust in wax, precisely like the original in plaster.

#### B.—Reproduction in Wax.

One half of the piece-mould is placed on the table, that is to say, one of the copes, with all its pieces, and the mould is wetted with water in order to prevent the wax from adhering to it; the workman then, with his thumb, presses wax into all the hollows of the mould—this is an operation of considerable delicacy. The wax, which must be very pure and malleable, is affected by the weather, working more easily in summer than in winter. The most suitable quality for average temperature is composed of 1 kilog. of yellow wax, 6·200 kilog. of mutton fat, 0·100 kilog. of white pitch, melted together and coloured a deep red with orcanette root.

The wax pressed into the mould should be 2 millim. thick. When all the hollows of the first cope have had wax of the requisite thickness pressed into them, the same process is applied to the second cope; the two copes, on being united, form a complete mould; they are then tied together with strong cords, and the joints of the copes are smeared with clay so that the mould should be watertight.

In the meantime another description of wax of harder consistency, composed of 1 kilog. of yellow wax, 1 kilog. of resin, and 0·250 kilog. of Venetian turpentine, has been melted in a cauldron and allowed to stand on the fire until the froth has subsided.

The wax being ready is allowed to cool to 60 or 70 degrees centigrade, when it is poured into the mould, which it fills, and is allowed to remain there for 40 seconds; the liquid wax is then poured out of the mould into a bucket prepared to receive it. On examining the interior it will be found that the soft wax which was pressed into the mould has received throughout a coating of strong wax 3 or 4 millim. in thickness, making an entire thickness of 5 or 6 millim., which will be the thickness of the bronze when cast.

#### C.—Formation of the Core.

The core is the substance with which is filled the hollow left in the mould after the liquid wax is poured out of it. If the bust were cast in bronze without a core it would come out solid and weighing ten or fifteen times heavier than is necessary, and the casting itself would be faulty owing to the great shrinkage produced by such a mass of molten metal, which would also have the effect of vitrifying the earths forming the mould. The core is, in fact, indispensable in the reproduction of artistic bronzes. The core in use at the Brussels *Compagnie des Bronzes* is formed of a mixture consisting of two parts of fine plaster of Paris and three parts of a pulverised earth composed of quartz sand, thin argillaceous clay with traces of iron oxide, carbonate of lime, magnesia, and potash, mixed together with pure water, forming a liquid paste which is called "*potin*," and which, like plaster of Paris, hardens very rapidly.

Having calculated the capacity of the hollow left by the wax, a quantity of "*potin*," sufficient to fill it, is prepared and poured into the hollow, leaving enough of the mixture to form a pedestal projecting about 10 centim. from the bottom of the bust. The core, having been thus poured into the hollow, is left to harden.

Before proceeding further it is necessary to describe the means by which an escape is provided for the air or gases of the core, which, if not set free, might destroy, twist, or otherwise injure the bronze.

This is effected by what is called, in the language of the foundry, a "*lanthorn*" or chimney, by which the core of every work in bronze must communicate with the external air. The core being composed of porous matter, it is easy to understand that when the molten metal enters the channel prepared for it, the core being completely isolated and superheated, the gas within it is violently dilated, and would force a passage through the fused metal if a vent were not prepared for it. If, owing to an accident or faulty arrangement, the lanthorn should not act, the bronze figure containing the core would be inevitably bulged and distorted, and would have other defects which would considerably diminish the value of the work.

In the case of the bust already described, when the piece-mould is emptied of the liquid wax that has been poured into it, and just as the "*potin*" which is to form the core is about to be poured in, a round stick, about 16 millim. in diameter, having a pin or iron point at the end, after being well oiled, must be fixed into the centre of the hollow of the bust, so that the pin should project through the wax of the top of the head. The stick must be held in this position while the "*potin*" is poured in round the stick, and when the "*potin*" begins to harden, which it will do in a few minutes, the stick is twisted out, leaving, of course, a hollow the size of the stick traversing the bust from the base to the head. After the artist-sculptor has retouched the wax bust, the mark left by the point of the stick is sought, and sufficient wax is removed round it to permit of a small iron tube of the same diameter as the hole left by the stick being forced 2 or 3 inches deep into the head, leaving, however, a portion projecting from the head and beyond the block-mould when it is formed over the wax-bust.

Any crack that may appear between the tube and the hole is carefully closed, and the wax is retouched where the tube projects from the head.



If the tube were not forced sufficiently into the head, or if the joint were not properly closed, the molten bronze would find a passage and fill up the chimney left for the escape of air from the core—an accident which would give rise to effects like those above referred to.

In complicated pieces the proper formation of the lanthorn is of the greatest importance; it is often difficult to arrange, and requires considerable experience to make and place it properly.

I am unable to give the precise proportions of the earths of which the "potin" is composed, which is in fact the only part of the process concerning which any reserve is shown.

The mould is then placed on the table, the cords are unfastened, the clay closing the joints of the two copes is removed, and by inserting a wedge between the two copes the upper cope is carefully lifted off. The workman then removes one by one all the little pieces forming the mould, exposing the corresponding parts of the bust in wax. When all the pieces are removed from the front, the bust is placed upright on its base of "potin," and the cope covering the back is then removed in the same way, together with the pieces forming the mould.

These pieces are then carefully returned to the cope each in its place, and the mould when put together again is ready to be used for another wax bust when required.

The bust now appears in wax reproducing exactly the original bust in clay, with the exception of the seams from the joints of the mould, which are then removed by the artist-sculptor himself.

Although wax is neither as easy nor as pleasant a material to work in as modelling-clay, a very short time suffices to enable the sculptor to manipulate it with facility, and an opportunity is afforded him of giving the finishing touches to his work with still greater delicacy than in clay.

It is at this period that the beard and curls of the hair which were removed before making the mould, and which have been separately reproduced in wax by the same process, are fixed in their respective positions by iron points which are driven through the wax into the solid core, and hold the pieces firmly in their places; the artist then going over the joints with a modelling tool renders them invisible.

(To be continued.)

## WORKS IN PROGRESS.

**Bleam Union Workhouse, near Canterbury.**—All the closets in this workhouse have been fitted by Moule's Patent Earth Closet Company with their self-acting apparatus, and are giving great satisfaction.

**The Indestructible Paint Company,** of 27 Cannon Street, London, E.C., are supplying "Browning's" patent paint, manufactured by them, for the whole of the work for the repainting of the workhouse and infirmary, St. Mary Abbott's, Kensington.

**Messrs. Diespeker & Co.,** 40 Holborn Viaduct, who have lately finished the mosaic flooring at St. Leonard's Church, Berwick St. John, Wilts, and St. John's Church, Clapham, are now at work laying the mosaic in the new Art Gallery, Wolverhampton; and have also nearly finished the mosaic at St. Saviour's Church, Paddington, of which we shall shortly give a fuller notice. The same firm have been laying a very fine piece of mosaic work for Lieut.-Col. J. Hamilton, M.P., embodying that gentleman's coat of arms.

**The Trinity Corporation** have just completed the series of tests to which the various samples of colza oil are each year subjected, and have placed the contract for the ensuing year with Sir A. W. Rose & Co., oil refiners, of London.

**Messrs. C. Isler & Co.** are at present boring at Cliffe, near Gravesend, for the Brick Company, having reached the depth of 158 feet. It is contemplated to go 250 or 300 feet to obtain fresh water. At the E. C. Powder Co.'s new works at Bean, near Dartford, they have just completed a 300-foot well, 208 feet of which is 6 feet in the clear, and the remainder 92 feet 8½ inches in diameter. The water level stands at 209 feet from the surface, and the supply obtained by hand-power is 2,500 gallons per hour.

**The Ancient Church at Wath,** near Ripon, North Yorkshire, having lately undergone restoration, has just got two other improvements—one in the shape of a new stained-glass window, the other in the shape of a large clock with two outside dials of solid cast-iron, with sunk centres and raised figures and minutes. The grounds of the dials are painted black; the hands, which are of strong copper, along with the figures and minutes, are gilt; one dial facing the rectory, the other down the Ripon Road, towards the court-house. The clock is constructed on a solid cast-iron bed frame, which is planed; all the bearings, of gun-metal, screwed into the frame, so that each or any wheel can be taken out in case of alteration or accident. The escapement is the double three-legged gravity by Sir E. Beckett, Bart., maintaining power on the bolt and shutter principle, and all the latest improvements inserted. The clock, which was manufactured by Messrs. Wm. Potts & Sons,

of Guildford Street, Leeds, was started by Sir Reginald Graham, Bart., of Norton Conyers. Messrs. Potts & Sons, of Leeds, started a similar clock with one dial at the parish church, Hemingford Grey, St. Ives, Hunts., on February 14, 1884.

**Messrs. Le Grand and Sutcliffe,** of 100 Bunhill Row, have received instructions to supply their Norton's patent registering turnstiles, and also the non-registering and exit cage turnstiles, for the Liverpool Zoological Gardens. The simplicity and accuracy of the recording indicators of these well-known turnstiles has led to their general adoption at all places of public resort where it is desired to keep a correct record of the admissions. The turnstiles referred to above are made somewhat more ornamental than the usual pattern by the introduction of bright brass arms.

**The Improved Wood Block Flooring** made by Mr. Roger L. Lowe, of Farnworth, has been specified on the following works, viz.:—Floors and corridors of the Hyde Town Hall (Mr. J. W. Beaumont, architect, Manchester); floors of the Birkenhead Town Hall (Messrs. C. O. Ellison & Son, architects, Liverpool); floors of the Nicholson Institute, Museum, and Free Library, Leek (Messrs. W. Sugden & Son, Architects, Leek); floor of Hatchett's Hotel, Piccadilly, London; floor of the Bon Marché, Liverpool (Messrs. Aldridge & Deacon, architects, Liverpool); floors of large new offices for M. S. & L. Railway Company, Great Grimsby Docks, Lincolnshire (Messrs. Mills & Murgatroyd, architects, Manchester); floors of new church at Runcorn, and also at Adlington (Messrs. T. D. Barry & Son, architects, Liverpool); floor of Messrs. Mort's printing office, Stafford (Mr. R. Griffiths, architect, Stafford); floors of large hotel extensions at Derby, for Midland Railway Company (Mr. J. H. Saunders, architect, Derby); floor of new church at Whitby, Yorkshire (Mr. R. J. Johnson, architect, Newcastle-on-Tyne); the whole of the floors for The Cottage, Bradford, near Reading; floors for the magistrates' rooms at the court-house, Wakefield (Mr. J. V. Edwards, West Riding County Surveyor); and many others.



## Caution to Architects.

SIR,—In the interest of architects, their clients, and ourselves, we feel called upon to state that having had a number of complaints made to us respecting the inefficiency of our patent self-acting air-pump ventilators, we have upon examination of the ventilators complained of found that they were not our ventilators, though ours had been specified to be used, the contractors having, for greater gain to themselves, substituted one or other of the inferior imitations of our ventilator now in the market, and which are purposely "got up" to resemble as near as possible in external appearance the air-pump ventilator.

In the cases referred to the contractors were compelled by the architects of the buildings to remove the imitation ventilators, and replace them with the air-pump ventilator at their own cost. In one case—a workhouse—the contractor had to replace no less than forty 24-inch ventilators.

Under these circumstances, we consider it necessary to caution the profession against such an imposition, and to respectfully request that when our ventilator is specified it is clearly stated that "Boyle's Patent Air-Pump Ventilator" is to be used. If this is done we think the result would be advantageous to architects and their clients, and save after trouble and annoyance; at the same time, it would be conferring a great favour upon us by preventing our credit from suffering through worthless imitations being mistaken for the air-pump ventilator.

We are, yours truly,  
ROBERT BOYLE & SON.

64 Holborn Viaduct.

Ventilating Engineers.

## CHURCH BUILDING AND RESTORATION.

**Deane Church.**—This building, which is near Bolton-le-Moors, is about to be restored. A view of the roof was published last week. The roof is an interesting example of the work of the period when it was erected. The sunken traceried panels in the principals and the carving in the spandrels are particularly quaint, although somewhat rough in execution. The building is one of the few old churches remaining in the district with any architectural character, and is about to be restored under the direction of Mr. R. R. Knill Freeman, F.R.I.B.A., of Bolton. The contemplated works are a new oak roof, following in all respects the design of the old one, and re-using any of the beams which may be sufficiently sound; removal of the west gallery and organ, also of one bay at east end of side galleries; forming baptistery under tower, and opening out the arch between nave and tower; extension of the chancel, and other works.



## LEGAL.

High Court of Justice—Chancery Division, Feb. 18.

(Before VICE-CHANCELLOR BACON.)

TURNER v. SMALLPAGE.

LIGHT AND AIR CASE.

This was an action by Mr. James Smith Turner, a surgeon-dentist, in George Street, Hanover Square, and his landlord, against Messrs. Smallpage & Son, tailors, of Maddox Street, for, in substance, a mandatory injunction to compel the defendants to pull down a chimney-stack which they had erected in the rear of their premises, and which the plaintiff, Mr. Turner, alleged obstructed the access of light to his operating room to such an extent as seriously to interfere with his practice as a surgeon-dentist. It appeared that the defendants had, prior to the recent rebuilding of their premises, given Mr. Turner an undertaking not to raise their wall opposite to the room in question higher than it formerly stood, but it was now alleged that the defendants had broken this undertaking by erecting on their wall the chimney-stack complained of.

The Vice-Chancellor said he was satisfied upon the evidence that the plaintiff, Mr. Turner, would be unable to enjoy his house or carry on his business with the same comfort and advantage as before if the chimney-stack in question were allowed to remain, and he had not heard a single argument urged why the promise or undertaking given by the defendants not to raise their wall higher than it was before should not be kept. The plaintiff was right in relying on that promise, and, moreover, it appeared that the moment his alarm was aroused by the defendants proceeding to erect their chimney-stack, he remonstrated with them on the subject. His Lordship was satisfied the plaintiff had established his case. It had been said that the Court ought not to interfere by way of mandatory injunction, but there was no reason in the world why the Court should not in a proper case grant such an injunction. There must, therefore, be a mandatory injunction as asked, with costs, but the order was not to be enforced for a month.

## SCHOOL BUILDINGS.

**Birmingham.**—At the meeting of the School Board, the committee reported that Mr. Dixon, the chairman of the Board, had offered for the purpose of a technical school to place a large building in Bridge Street at the service of the Board for five years, rent free; to make all the necessary structural alterations, and to provide heating apparatus, &c., at his own cost, so that it would only remain for the School Board to provide the requisite furniture and to pay the teaching staff. The plans which the chairman had had prepared provided a laboratory, a lecture theatre, a room lighted by skylights for teaching drawing, and two class-rooms for instruction in the ordinary school subjects; besides a workshop, which would be fitted with carpenters' benches and lathes for teaching the use of tools. There would also be a dining-room for the use of boys who might stay on the premises during the dinner-hour, and a convenient lavatory, offices, &c.

**Delph.**—It is intended to erect a new school to accommodate about 400 scholars for the congregation of Delph, Saddleworth, adjoining the present chapel. Mr. A. Banks, Rochdale Road, Oldham, has been commissioned to prepare the necessary plans.

**Stoke Prior.**—The united district School Board for Stoke Prior propose to erect a new school, and purpose obtaining a site at Rashwood for the buildings. Mr. John Cotton, of Birmingham and Bromsgrove, has been selected as architect for the schools.

## ARCHÆOLOGY.

**Cup Marks on Rocks.**—Antiquaries and others in Shetland are manifesting considerable interest at the present time in the subject of "cup marks" found on the rocks in certain districts throughout the islands. Mr. Sands, who spent some time in St. Kilda, and has recently been residing in outlying districts in Shetland, has devoted a good deal of attention to the matter, upon which he writes:—"If the distribution of cup marks throughout all Shetland could be ascertained, it might be the means of throwing much light on the prehistoric ages, which are at present wrapt in darkness; but this would be a task impossible for one man to accomplish. Although the making of these marks must have been as great as the building of the pyramids, they are unobtrusive, and may escape the notice of a stranger who passes within a few yards of them. Their existence in a particular district is only known to those who have been brought up there. I trust gentlemen of antiquarian tastes will turn their attention to the subject, and collect information in their localities and report. That these cups were not designed merely for the secular purpose of holding or pounding limpets is evident to me, who have seen them on rocks two miles from the sea, and even on the sides of boulders. I believe that they are a gigantic relic of solar worship, and I have discovered

that the groups form mystic numbers. This is not apparent at a glance; but, on the contrary, it seems as if the designers had planned so that they might remain a mystery to all who had not received the key. The belief in magic numbers is still prevalent in the Hebrides, as well as in Foula, and probably in other parts of Shetland. Nine was a favourite number with the Norsemen, although I infer that the cup marks were made on the rocks or Shetland long before the Norse invasion, and in Foula nine knots are to this day tied upon the 'wresten thread' which is bound round a joint to cure a sprain. The orthodox number of feathers on the tirl of a mill is nine, and other examples could be given. Vestiges of sun worship are numerous in the customs of the inhabitants of Foula. Cups, although they are not confined to rocks suitable for fishing, are generally to be found there, and it may have been believed that they conferred a magical character on the bait. They prove that the same widespread and deep-rooted superstition existed in Shetland as in the Western Highlands and islands of Scotland, and, if thoroughly investigated, may prove a great deal more."

## ENGINEERING WORKS.

**American Bridges.**—The entire length of the great cantilever bridge over the Niagara, which has just been completed, is 910 feet, the distance between the towers being 470 feet. It is 239 feet high from the water to base of rail. Most of the material is steel. The bridge has been tested in the presence of 10,000 spectators. The test consisted in the running of twenty heavy locomotives and twenty-three cars laden with gravel upon the bridge, the entire series halting at every hundred feet, while the engineers made observations. The total load amounted to 1,900 tons. The bridge bore the trial well. It is a slender, graceful structure, erected at a cost of 750,000 dols. There has also just been completed a massive stone bridge over the Mississippi river at Minneapolis. The length of the structure is 2,100 feet. It crosses the river with twenty-three arches and sixteen spans of 80 feet each, the width being 28 feet. The cost of the bridge, which has been erected by the St. Paul, Minneapolis, and Manitoba Railway Company, is stated to be 990,000 dols.

## GENERAL.

**Mr. J. D. Linton** has been elected president of the Royal Institute of Painters in Water-Colours, and Mr. J. H. Mole, vice-president.

**Mr. A. Wells** read a paper on "The Rise and Development of Ornament" at a meeting of the architectural section of the Glasgow Philosophical Society on Monday last.

**The Annual Exhibition** of the Manchester Academy of Fine Arts was opened to the public on Wednesday.

**Mr. Boehm, R.A.**, is engaged on a bust in terra-cotta of Mr. Herbert Spencer.

**The Rev. St. J. Tyrwhitt** is delivering a series of four lectures in connection with the Gilchrist Trust, at Banbury, on "Art in its Historical Development."

**The Erection** of the Dunfermline Galleries has been postponed for the present.

**Mr. F. Mackison**, architect, of Stirling, died last week, and was buried on Monday. Among the public buildings designed by him were the Callander Hydropathic Establishment, the parish church, Callender, and several Board schools. Mr. Mackison was in his sixty-second year.

**Birmingham Architectural Association.**—An ordinary meeting of this Association was held at Queen's College on the 12th inst. under the presidency of Mr. J. Cotton. Messrs. W. Hawley Lloyd and W. Tadman Foulkes were elected honorary members, and one other gentleman was proposed for membership. A paper was read by Mr. J. Spencer Swann on "The Influences of Literature on Art." A discussion and a vote of thanks followed, in which Messrs. H. H. McConnal, V. Scruton, T. W. F. Newton, and Franklin Cross, hon. sec., joined.

**Perry & Co., Limited**, have during the past year derived a profit of 23.082% from the business of the Company. After the usual deductions for depreciation of plant, fixtures, &c., a dividend of 7 per cent. will be paid on March 1, making, with the interim dividend, a total of 10 per cent. on the ordinary shares.

**The Governors** of the Llanely Hospital advertised for plans for a new hospital in November last, to which about twenty-seven architects responded. They selected a few designs out of the number for reference, the referee being Mr. Salter, F.R.I.B.A., of Woburn Place. He placed the designs in the following order of merit:—(1) Mr. E. M. Bruce Vaughan, Cardiff; (2) Messrs. Wilson & Dyer, London and Swansea; (3) Messrs. James, Seward & Thomas, Cardiff. He recommended Mr. Bruce Vaughan to be employed as architect, and the committee, at their meeting on Monday last, gave him instructions to proceed with the work.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, FEBRUARY 23, 1884.

### COMPETITIONS OPEN.

**ABERDEEN.**—July 1.—The Testamentary Trustees of the late Mr. John Steill, of Edinburgh, hereby notify that they will Receive Models for a Colossal Statue of Wallace, in Bronze, with Basement of Granite Blocks, to be placed on the Mound in the North-West part of the Duthie Public Park, near the City of Aberdeen, in conformity with Instructions left by Mr. Steill, at a cost not exceeding £3,000. Intending Competitors, on Application, accompanied with a Remittance of 10s. 6d. to Mr. John Otto Macqueen, 10 Bridge Street, Aberdeen, will be supplied with Copies of Mr. Steill's Instructions, Conditions of the Competition, and Lithograph Plan of the Duthie Park, showing Sections of the Mound. The Author of the Accepted Model will be employed to Execute the Work; and the Author of that next in order of merit will Receive a Premium of £50.

**BLOEMFONTEIN.**—March 31.—The Government of the Free Orange State, South Africa, for a Premium of £100 for Design selected for New Presidency, and a Premium of £100 for Design selected for New Chamber of Deputies. The Consul of the Orange Free State, 17 Gracechurch Street, E.C.

**LEICESTER.**—March 1.—Designs are invited for a Block of Buildings proposed to be erected on the South Side of New Entrance to the Market Place. Premiums of £25 and £15. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

**LONDON.**—March 1.—The Commissioners of H.M. Works and Public Buildings are prepared to receive Designs for New Buildings proposed to be erected in Whitehall for the Admiralty and War Office. Mr. A. B. Mitford, Secretary, H. M. Office of Works, 12 Whitehall Place, London.

**NEWCASTLE-ON-TYNE.**—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

**STANWIX.**—March 11.—Plans are required for Buildings for a Home for Incurables. Mr. D. R. Harrison, Cavendish Mount, Stanwix.

**WIDNES.**—March 20.—Designs are invited for Public Offices and Town Hall. Mr. J. T. Allen, Public Offices, Widnes.

### CONTRACTS OPEN.

**ASHTON-UNDER-LYNE.**—Feb. 25.—For Building Schools for the Holy Trinity Church. Messrs. John Eaton & Sons, Architects, Ashton-under-Lyne.

**AUDENSHAW.**—For Supply of Material and Execution of Works, in Three Contracts, for Drainage. Mr. J. H. Burton, Surveyor, Warrington Street, Ashton-under-Lyne.

**BANSTEAD.**—Feb. 28.—For Building Three Additional Houses at the Cottage Home School. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**BELFAST.**—For Building School at Sydenham. Mr. W. J. Fennell, Architect, 11 Chichester Street, Belfast.

**BELFAST.**—Feb. 27.—For Building Public Library Reading-rooms, &c. Mr. W. H. Lynn, Architect, 21 Calender Street, Belfast.

**BIRKENHEAD.**—Feb. 25.—For Building Public Lavatories. Mr. T. C. Thorburn, Borough Surveyor, 35 Hamilton Square, Birkenhead.

**BOURNEMOUTH.**—March 1.—For Building Dwelling-house, West Hill Road. Mr. Herbert W. Dibden, Solicitor, Wimborne.

**BRADFORD.**—March 1.—For Building Shops, Warehouses, &c., at St. James's Markets. Mr. J. H. Cox, Borough Surveyor, Bradford.

**BRIGHTON.**—Feb. 26.—For Building Four Cottages. Mr. P. C. Lockwood, C.E., Town Hall, Brighton.

**BUCKLAND.**—Feb. 28.—For Building Infirmary at Workhouse. Messrs. Trevor & Cresswell, Architects, 53 Castle Street, Dover.

**CATHAYS.**—Feb. 28.—For Building Fifty-seven Cottages. Mr. J. P. Jones, Architect, 26 Park Street, Cardiff.

**CHIPPING CAMPDEN.**—Feb. 25.—For New Works at Church. Messrs. Waller, Son & Wood, Architects, 17 College Green, Gloucester.

**CORK.**—Feb. 25.—For Building Store and Offices. Mr. J. F. M'Mullen, C.E., Mary Street, Cork.

**CORK.**—For Building Schools at Ballinlough, Blackrock. Mr. D. J. Coakley, Architect, 86 South Wall, Cork.

**EARLSDON.**—For Building Two Residences in Moore Street. Mr. William Tomlinson, Architect, Hertford Street, Coventry.

**EASTBOURNE.**—For Building Stabling for Fifty-nine Horses, with Carriage Accommodation. Mr. Oliver Mitchell, Architect, Eastbourne.

**FARLEY.**—March 3.—For Building Mill. Mr. C. S. Nelson, Architect, Albert Chambers, Park Row, Leeds.

**FELIXSTOWE.**—March 1.—For Building Pair of Semi-detached Houses. Mr. W. Eade, Architect, Post Office Chambers, Ipswich.

**FENCEHOUSES.**—March 4.—For Converting Britannia Ironworks into Miners' Cottages. Mr. Francis Parr, Architect, Darlington.

**FOLKESTONE.**—For Additions to Christ Church. Mr. A. B. Barker, Architect, 11 Buckingham Street, Strand.

**GRANTHAM.**—March 6.—For Building Stores. Mr. T. E. Watson, Architect, St. Peter's Hill, Grantham.

**GUILDFORD.**—March 1.—For Building Washhouses to Cottages. Mr. W. G. Lower, Architect, 106 High Street, Guildford.

**HECKINGTON.**—For Building House. Mr. J. R. Benstead, Architect, Sleaford.

**HUCKNALL TORWARD.**—March 1.—For Additions to Schools. Messrs. Booker, Architects, Short Hill, Hollowstone, Nottingham.

**ILKLEY.**—March 1.—For Building Gardener's Lodge and Laundry at Convalescents' Home. Mr. J. H. Cox, Borough Surveyor, Bradford.

**KENDAL.**—For Building Organ Manufactory, Residence, Pianoforte Saloons, Offices, Boundary Walls, Machinery Rooms, Engine House, Sheds, &c. Mr. Eli Cox, Architect, Government Offices, Highgate, Kendal.

**KENDAL.**—March 4.—For Building Residence. Mr. Stephen Shaw, Architect, Kendal.

**LEEDS.**—For Erection of Building and Alterations to Warehouses. Mr. W. Bakewell, Architect, 38 Park Square, Leeds.

**LEEDS.**—Feb. 27.—For Building Jerusalem Church. Mr. H. Isitt, Architect, Queen Anne Chambers, Sunbridge Road, Bradford.

**LEWISHAM.**—For Building Semi-detached Villas. Mr. A. L. Guy, Architect, 13 Walbrook, E.C.

**MIDFORD.**—March 4.—For Construction of Bridges at Freshford and Midford. Plans, &c., at the Railway Station, Reading.

**PLUMSTEAD.**—March 4.—For Building Shops. Mr. J. F. Goodey, Architect, 2 Victoria Chambers, West Stockwell Street, Colchester.

**RIO DE JANEIRO.**—Feb. 28.—For Lighting the City with Electricity. The Brazilian Consulate General, 6 Great Winchester Street Buildings, E.C.

**SOUTH BANK.**—Feb. 25.—For Enlargement of Police-station. Mr. Walker Stead, C.E., Court House, Northallerton.

**SOUTH ELSMALL.**—Feb. 27.—For Building Wesleyan Church. Mr. J. Wilson, Architect, 12 East Parade, Leeds.

**SOUTH TYNE.**—March 1.—For Restoration and Alterations, Birtley Church. Mr. Arthur B. Plummer, Architect, 46 Cloth Market, Newcastle-on-Tyne.

**SOUTH STOCKTON.**—Feb. 25.—For Building Schools for 1,000 Children. Mr. H. Weatherill, Architect, High Street, Stockton.

**STOKESLEY.**—Feb. 25.—For Rebuilding Skutterskelf Bridge. Mr. Walker Stead, C.E., Court House, Northallerton.

**STRATHSPEY.**—March 1.—For Erection of Distillery Buildings at Cardow. Messrs. Reid, Architects, Elgin.

**WEST ARDSLEY.**—March 1.—For Additions to Infants' School. Mr. J. Sykes, Architect, Princess Street, Morley.

**WEST BROMWICH.**—March 10.—For Building Board Schools at Black Lake, for 1,060 children. Mr. E. Pincher, Architect, 274 High Street, West Bromwich.

**WEST KENSINGTON.**—For Completion of Church. Mr. J. Cubitt, Architect, 2 Broad Street Buildings, E.C.

**WHITBY.**—Feb. 25.—For Building St. Hilda's Church. Mr. E. J. Johnson, Architect, 3 Arcade, Newcastle-on-Tyne.

### TENDERS.

#### ACCRINGTON.

For Accrington Main Sewage Works. Contract No. 4.	
Mr. E. KNOWLES, Borough Surveyor.	
Connord, Southport . . . . .	£3,616 0 0
Slings, Cleckheaton . . . . .	8,338 0 0
G. & J. E. Read, Burnley . . . . .	3,061 17 10
Jones, Liverpool . . . . .	2,774 14 6
Sharples, Accrington . . . . .	2,457 8 8
F. & J. Grimshaw, Accrington . . . . .	2,390 0 0
Hunter, Accrington . . . . .	2,116 5 9
LOMAX, Eccles (accepted) . . . . .	1,878 13 4

#### ALLBRIGHTON.

For Heating New Chapel, Allbrighton, by Hot-water Apparatus (Patent Furnace).  
GIBBS, Liverpool (accepted).

#### ARDEE.

For Sinking Water-courses on North and South sides of River Dee, and Construction of Tanks and Sewers, with Auxiliary Works, Ardee Union.	
Kelly & Co., Dublin . . . . .	£1,293 14 0
WYNNE, Dundalk (accepted) . . . . .	1,286 6 0

#### BEDFORD.

For the Erection of a Pair of Cottages and Machine and Engine Houses at Putnoe, Goldington, for Mr. Charles Pope. Messrs. USHER & ANTHONY, Architects and Surveyors, Bedford.	
HARRISON, Bedford (accepted) . . . . .	£598 0 0
For the Erection of Dwelling-house in De Parys Avenue, Bedford, for Mr. W. J. Robinson. Messrs. USHER & ANTHONY, Architects and Surveyors, Bedford.	
FOSTER, Kempston (accepted) . . . . .	£1,203 4 0
For Alterations and Additions to Business Premises, High Street, Bedford, for Mr. E. P. Rose. Messrs. USHER & ANTHONY, Architects and Surveyors, Bedford.	
Knight & Boston . . . . .	£2,518 0 0
Foster . . . . .	2,430 0 0
Spencer . . . . .	2,398 0 0
WARTON & WALKER, Bedford (accepted) . . . . .	2,382 0 0

#### BELPER.

For Extension and Alteration of Cowhill Board School, Belper. Mr. GEORGE EYRE, Architect, Codnor.	
Hingley . . . . .	£135 0 0
Wood . . . . .	122 0 0
Loomes & Ryde . . . . .	119 0 0
Walker & Sons . . . . .	108 0 0
Wheeldon Bros. . . . .	105 0 0
Dyer . . . . .	104 0 0
Warren . . . . .	88 10 0
Messrs. BODELL & SON (accepted) . . . . .	89 15 0

#### BIRKENHEAD.

For Building Offices and Stores at the Gasworks, Birkenhead.  
FORDE (accepted).



**BIRMINGHAM.**

For Heating Business Premises, Vyse Street, Birmingham, (Patent Furnace).  
GIBBS, Liverpool (accepted).

**BLACKBURN.**

For Building Infirmary at the Union Workhouse, Blackburn. Mr. JAMES ASPINALL, Architect, Blackburn. Quantities by the Architect.

*Accepted Tenders.*

Lewis & Son, Blackburn and Great Harwood, masons and bricksetters	£9,420 0 0
Rutledge, Darwen, carpenter and joiner	2,592 10 0
Clayton, Goodfellow & Co., Blackburn, ironfounders	1,325 0 0
Eastwood, Blackburn, flagger and slater	759 10 0
Walsh & Son, Blackburn, plumbers and glaziers	690 0 0
Whalley, Blackburn, plasterer	333 0 0
<b>Total</b>	<b>£15,120 0 0</b>

**BURNLEY.**

For Building Baptist Schools, Burnley. Mr. HENRY SMITH, Architect. Quantities by the Architect.

Smith, mason	
Nuttall & Co., joiners	
Collinge Bros., plumbers	
Coupe, plasterer	£1,439 0 0
Baldwin & Kippax, painters	
Stanworth, slater	

**CHERTSEY.**

For Alterations and Additions to Silverlands, Chertsey, for Mr. F. A. Hankey. Mr. GEORGE A. DUNNAGE, Architect, 5 John Street, Adelphi. Quantities by Messrs. J. & A. E. Bull, 35 Craven Street, W.C.  
KNIGHT & SONS (accepted) . . . £9,143 0 0

**DROPMORE.**

For Works to Roofs of Mansion House, at Dropmore, near Maidenhead, for Lady Louisa Fortescue. Mr. G. B. MAYO, Architect.

		Allowance for old Materials.
Watson, Ascot	£847 13 0	£135 0 0
Burman & Sons, Enfield	785 0 0	85 0 0
North & Son, Southwark	790 0 0	100 0 0
Boulter, Slough	743 0 0	65 0 0
Harbrow, Brixton	717 7 0	77 0 0
Simonds, Reading	720 9 0	120 0 0
Deverill, Slough	645 0 0	75 0 0
Almond, Burnham	634 7 6	45 0 0
Taylor, Uxbridge	634 0 0	76 0 0
WOODBRIDGE, Maidenhead (accepted)	615 0 0	80 0 0
Williams, Beaconsfield	569 9 3	50 0 0

**DUBLIN.**

For Works of Gasfitting at Children's Home, Cabra, North Dublin Union.

Ross, Murray & Co.	£159 0 0
Anderson	132 10 0
Curtis & Sons	116 0 0
Clarkson	103 0 0
Daniel	97 10 0
Gregg & Son	95 0 9
Birney	92 15 9
KERRILL (accepted)	85 0 0

**EDINBURGH.**

For Juniper Green Waterworks, for the Edinburgh and District Water Trustees.

*Pipe-laying.*

Shaw, Edinburgh	£460 0 0
Steuart, Barrhead	451 1 1
Simpson, Sterling	417 16 3
Mackenzie, Kirkcaldy	400 0 0
Duncan, Leith	398 19 6
Masterton, Kirkliston	390 11 8
Connolly, Kirkcaldy	365 17 4
J. & W. Torrance, Kirkcaldy	344 10 5
McDonald & Son, Hawick	339 5 2
MIMO & COUPAR, Dunfermline (accepted)	332 0 0

*Iron Pipes.*

Edington & Sons, Glasgow	£1,007 8 9
Stewart & Co., Edinburgh	1,000 4 8
Macfarlane, Strang & Co., Glasgow	989 19 1
Laidlaw & Son, Glasgow	987 5 6
McLAREN & Co., Glasgow (accepted)	978 12 10

**EPSOM.**

For Alterations to the Pines, Epsom. Mr. H. D. CHURCH, Architect.

Akerman	£515 13 0
Touson	383 15 6
Shurmur	378 0 0
Tobbins	358 0 0
Godden	319 0 0

**EWELME.**

For Completing House at Ewelme, Oxon., for the Trustees of Mr. B. W. Ranter. Mr. J. S. DODD, Architect, Reading.

Holly & Butler, Nettlebed	£895 0 0
Selby, Oxford	663 0 0
Brasher, Wallingford	649 0 0
Partlo, Tilehurst	654 0 0
Woodroffe, Reading	645 0 0
Dover, Oxford	640 0 0
Newberry, Reading (too late)	600 0 0
Wellar, Wallingford	595 0 0
Cox, Henley-on-Thames	564 0 0
BUCKLE & WHEELER, Abingdon (accepted)	515 0 0

**GORING.**

For Constructing New Roads in Goring Building Estate. Mr. J. S. DODD, Surveyor Reading.

Talbot, Caversham	£675 0 0
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**ENFIELD.**

For Building New Schools at Enfield, for the Guardians of the Poor of the Edmonton Union. Mr. J. E. KNIGHTLEY, Architect. Quantities by Messrs. Batterbury & Huxley and Mr. Edward Clark.

		If with Arley facing bricks extra.
Bentley	£64,915 0 0	£2,308 0 0
Tongue	63,351 0 0	1,538 0 0
Hack	62,994 0 0	1,530 0 0
Downs	61,332 0 0	1,332 0 0
Hobbs	61,000 0 0	1,538 0 0
Shurmur	58,365 0 0	769 0 0
Hart	57,354 0 0	1,489 0 0
Greenwood	57,259 0 0	1,730 0 0
Nightingale	56,545 0 0	879 0 0
Holliday	56,397 0 0	1,635 0 0
Brass	54,283 0 0	1,370 0 0
WALL (accepted)	52,980 0 0	769 0 0
Foster & Dicksee	52,620 0 0	1,153 0 0
Howell	51,765 0 0	1,700 0 0

**FELLING.**

For Re-erection of Covered Play Shed at the Bill Quay Schools, for the Heworth School Board.

Davidson, Felling	£110 0 0
Tynie, Gateshead	81 12 3
Loraine, Heworth	75 0 0
DONNISON & THOMPSON, Felling (accepted)	65 0 0

**GELLIGAER.**

For Supplying and Laying Pipes for the Drainage of Streets in Pontllynn, Gelligaer. Mr. JAMES JONES, Surveyor, Cefn Coed, Merthyr Tydfil.

Pearson & Paul, Gelligaer	£493 8 0
Taylor, Pontypridd	413 0 0
Matthews, Gelligaer	393 10 4
Williams & Son, Gelligaer	330 0 0
Price, Dowlais	323 2 0
LEWIS & THOMAS, Gelligaer (accepted)	313 13 0

**HALIFAX.**

For Painting, Staining, and Varnishing Work at Shops and Warehouse, Commercial Street, Halifax. Mr. T. L. PATCHETT, Architect.

*AKED (accepted).***HAMPSTEAD.**

For Erection of Four Detached Villa Residences, Maresfield Gardens, Fitzjohn's Avenue, Hampstead, for Mr. Julius Wilson. Messrs. BATTERBURY & HUXLEY, Architects.

*MANLEY, Regent's Park (accepted).*

For Stabling, Nutley Terrace, Fitzjohn's Avenue, Hampstead, for Mr. Julius Wilson. Messrs. BATTERBURY & HUXLEY, Architects.

*MANLEY, Regent's Park (accepted).***KEIGHLEY.**

For Execution of Street Works, Keighley. Mr. W. H. HOPKINSON, Borough Surveyor.

*Devonshire Street.*

Hall, Bradford	£563 0 0
Brown, Shipley	498 0 0
Speight, Leeds	498 0 0
Griffith	447 0 0
Dewhurst Halifax	433 0 0
Holmes, Keighley	412 0 0
Rhodes Bros., Shipley	404 0 0
TEMPEST, Keighley (accepted)	404 0 0
Broderick, Keighley	399 0 0
Engineer's estimate	432 0 0

*Belgrave Road.*

Hall, Bradford	£832 0 0
Speight, Leeds	771 0 0
Brown, Shipley	753 0 0
Holmes, Keighley	661 0 0
Dewhurst, Halifax	649 0 0
Griffith	625 0 0
Broderick, Keighley	605 0 0
Rhodes Bros., Shipley	593 0 0
TEMPEST, Keighley (accepted)	584 0 0
Engineer's estimate	623 0 0

**LEWES.**

For Additions and Sanitary Alterations at Sussex County Asylum, Lewes. Mr. HENRY CARD, County Surveyor, Lewes.

Lockyer, Brighton	£3,954 0 0
Cheesman, Brighton	3,480 0 0
Smith & Co., Worthing	3,330 0 0
Knight, Cuckfield	3,184 0 0
Box, Ardingly	3,089 0 0
NORMAN, Burgess Hill (accepted)	2,895 0 0

**LEYLAND.**

For Building new Class-rooms, St. Mary's School, Leyland, Preston. Mr. D. GRANT, Architect, Preston.

*Accepted Tenders.*

Simpson, Leyland, brickwork, stonework, plasterwork, slating, and flagging.	
Tomlinson, Leyland, woodwork.	
Hesketh, Leyland, plumbing, &c.	
Dryden, Preston, ironwork.	
Stones, Ulverston, revolving school divisions.	
Amount of Tenders, £234.	

**LONDON.**

For Repainting of St. Mary Abbott's (Kensington), Workhouse and Infirmary. Mr. ARTHUR BAKER, Architect, 14 Warwick Gardens, Kensington.

INDESTRUCTIBLE PAINT COMPANY, 27 Cannon Street, E.C. (accepted).

For Alterations to Mr. Goring's Brewer Street Premises, Pimlico. Mr. J. T. WALFORD, Architect.

Scrivenner & Co. (no time)	£1,698 0 0
Hall, Beddall & Co. (April 1)	1,294 0 0
Fish, Prestige & Co. (two months)	1,150 0 0
Wilkes & Co. (two months)	1,076 0 0

**LONDON—continued.**

For Erection of the Shakespeare publichouse at Peckham. Mr. J. REYNOLDS, Architect.

Goad	£929 0 0
Shurmur	927 0 0
Brown	890 0 0
W. Smith	796 0 0
S. Smith	765 0 0
PARKER (accepted)	695 0 0

For Proposed new Building at the corner of St. Mary Axe and Great St. Helen's, E.C., for Mr. A. Kelday. Mr. T. CHATFIELD CLARKE, Architect.

Conder	£9,035 0 0
J. & J. Greenwood	8,632 0 0
Colls & Sons	8,338 0 0
Holland & Hannen	8,212 0 0
Redman	8,184 0 0
Hall, Beddall & Co.	7,985 0 0
Ashby Bros.	7,858 0 0
G. H. & A. Bywaters	7,763 0 0
Ashby & Horner	7,664 0 0
Nightingale	7,473 0 0
Lawrance & Sons	7,418 0 0

**NATLAND.**

For Erecting First Block of Buildings for St. Mark's Home, Natland. Mr. D. BRADE, F.R.I.B.A., Architect.

*Accepted Tenders.*

Pennington, walling and masonry.	
Trotter, plasterer.	
Nelson, carpenter and joiner.	
Airey, smith and plumber.	
Hine, painter and glazier.	
Golding, slater.	
Total, £1,050.	
All of Kendal.	

**NEWHEY.**

For Building Two Houses, and Alterations to Union Buildings, Newhey. Messrs. BUTTERWORTH & DUNCAN, Architects, Rochdale.

Milne, Newhey	£640 0 0
Henthorne, Newhey	627 0 0
Clegg, Milnrow	582 0 0
J. & G. MANN, Newhey (accepted)	573 0 0

**NEW SWINDON.**

For Erection of St. Paul's Vicarage, New Swindon. Mr. JOHN BEVAN, Architect, Bristol. Quantities supplied.

Wilkins & Sons, Bristol	£1,590 0 0
Church, Bristol	1,490 0 0
Cowlin & Son, Bristol	1,459 0 0
Stephens & Bastow, Bristol	1,450 0 0
Forse, Bristol	1,445 0 0
Barrett, Swindon	1,390 0 0
King & Son, Bitton	1,362 0 0
E. & T. Hatherly, Bristol	1,350 0 0
Howell & Son, London and Bristol	1,336 0 0
Jones, Gloucester	1,320 0 0
Wheeler, Wantage	1,275 13 6
WILTSHIRE, Swindon (accepted)	1,236 0 0

**NOTTINGHAM.**

For Retaining Walls in Buttress and Arcade Work for Intramural Interments in Vaults and Catacombs, Nottingham Church Cemetery. Mr. FREDK. JACKSON, C.E., Architect, Nottingham.

Lynam & Kidd, Nottingham	£1,925 0 0
Bradley & Barker, Nottingham	1,865 0 0
Meats Bros., Nottingham	1,770 0 0
Hodson, Nottingham	1,471 0 0
Beck, Matlock	1,308 0 0
Smart, Nottingham	1,282 0 0
S. & J. Cargill, Nottingham	1,250 0 0
FOSTER & BARRY, Nottingham (accepted)	1,127 0 0
Architect's Estimate	1,233 10 0

For Construction of Service Reservoir, Mapperley Plains, Nottingham. Mr. M. OGLE TARBOTTON, Engineer, Nottingham.

SMART, Nottingham (accepted)	£5,106 10 0
Highest Tender	7,841 0 0
Lowest Tender	5,083 17 0

**OAKINGTON.**

For Building Harvest Home, Oakington. Mr. FRANK WATERS, Architect, Cambridge. Quantities supplied.

Christmas, Histon	£435 0 0
Hammond, Longstanton	432 0 0

**PADSTOW.**

For Building a Residence at Treator, Padstow, Cornwall, for Mr. W. M. Richards. Mr. SILVANUS TREVAIL, Architect, Truro. Quantities not supplied.

JULIAN, Truro (accepted)	£1,250 0 0
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**RHAYADER.**

For Additions, Cefnfeio, Rhayader, Radnorshire.

Hamer, Rhayader	£497 14 0
Davies, Hereford	468 0 0
Williams, Knighton	467 7 0
Evans, Rhayader	459 0 0
Bowers & Co., Hereford	449 0 0
Dore, Rhayader	425 0 0
Davies, Newtown	376 0 0
TREASURE & SON, Salop (accepted)	463 0 0

**ROCKINGHAM.**

For Building Dwelling-house, Offices, Boundary Walls, &c., Rockingham. Mr. WALTER J. SYKES, Architect. Quantities by the Architect.

*Accepted Tenders.*

Robinson, mason	£661 0 0
T. & J. Hawley, joiner	247 7 0
Calvert, slater	67 7 9
Firth, plumber	52 0 0
Maycock, plasterer	45 0 0

**Total** . . . £1,072 14 9



**ROMFORD.**

For the Erection of School and Class-rooms for the Trustees of Romford Congregational Church. Mr. E. C. ALLAM, Architect, Romford. Quantities supplied.

Abraham, Romford . . . . .	£1,250 0 0
Staines & Son, London . . . . .	1,148 0 0
Dowsing, Romford . . . . .	1,086 0 0
Daney, Romford . . . . .	1,030 0 0
Death, Romford . . . . .	1,015 0 0
Wood, Chelmsford (accepted) . . . . .	1,010 0 0
Architect's Estimate . . . . .	1,011 0 0

\* Amended estimate to include additional work, £1,160.

**SOUTHAMPTON.**

For Alterations at Municipal Offices, Southampton. Mr. BENNETT, Borough Surveyor.

Jackson . . . . .	£216 0 0
Stevens & Sons . . . . .	211 0 0
Crook . . . . .	182 7 0
Rowland . . . . .	169 0 0
MARTIN (accepted) . . . . .	137 0 0
Surveyor's estimate . . . . .	150 0 0

**ST. MINVER.**

For Building a Marine Residence at Polseath, St. Minver, Cornwall, for Mr. W. J. Rendell. Mr. SYLVANUS TREVAIL, Architect, Truro. Quantities not supplied.

JULIAN, Truro (accepted) . . . . . £615 0 0

**TOTTENHAM.**

For Works in St. Paul's Road, Tottenham. Mr. DE PAPE, Surveyor.

Bell, Cheshunt . . . . .	£473 0 0
BLOOMFIELD, Tottenham (accepted) . . . . .	485 10 0

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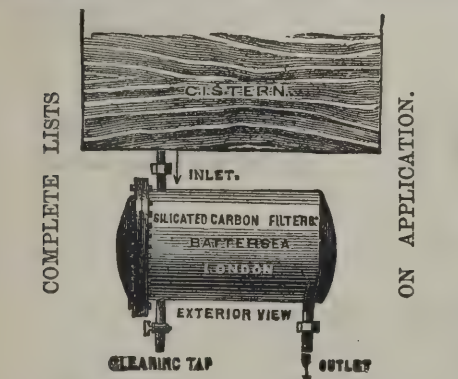
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**TODMORDEN.**

For Additions to Stoneyroyd Villa, near Todmorden. Mr. JESSE HORSEFALL, Architect. Quantities by the Archi-  
tect.

Accepted Tenders.  
Barker, mason, &c.  
Mallison, joiner.  
Barnes & Sons, slater.  
Whitaker, plumber.

**TREHERBERT.**

For Building English Congregational Chapel, Station  
Street, Treherbert. Mr. J. REES, Architect.

Jones & Davis . . . . .	£1,530 0 0
Edwards Bros. . . . .	1,220 0 0

**UCKFIELD.**

For Redraining of the Union House, Uckfield, Sussex, and  
other Sanitary Improvements. Mr. HENRY CARD,  
Surveyor.

FARRANT (accepted).

**WARWICK.**

For Heating new Board Schools, Warwick, by Hot-water  
Apparatus (Patent Boiler).  
RENTON GIBBS, Liverpool (accepted).

**WELWYN.**

For Extension of Infirmary Accommodation at the Work-  
house, Welwyn.

Fisher, Cowbridge . . . . .	£110 0 0
Raves, Welwyn . . . . .	106 3 0
Green, Benges . . . . .	104 0 0
Ranson, Arlesey . . . . .	96 0 0
Blow, Welwyn (accepted) . . . . .	95 18 6

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**URMSTON.**

For Private Street Improvement Works (Contract No. 20),  
for the Barton-upon-Irwell Sanitary Authority, con-  
sisting of the Sewering, Levelling, and Laying Founda-  
tions in Gladstone Road, and the Sewering of Gran-  
ville Road, both streets lying in the Township of Urm-  
ston. Quantities supplied by the Engineer, Mr. JOHN  
PRICE, Assoc.M.

Snap & Sons, Eccles . . . . .	£605 4 6
Randall, Weaste . . . . .	602 6 0
Oakes, Kearsley . . . . .	565 4 10
Bird, Chorlton . . . . .	561 0 0
Unsworth, Mors Side . . . . .	546 14 6
Naylor, Hulme . . . . .	533 4 3
Willan, Chalton-on-Medlock . . . . .	510 1 7
Worthington, Rusholme . . . . .	474 6 3
Hannett, Ashton . . . . .	443 18 2
LOMAX, Eccles (accepted) . . . . .	438 14 0
Engineer's estimate . . . . .	515 0 0

**YARDLEY.**

For the Erection of Schools at Spark Hill, Yardley. Mr.  
W. HAWLEY LLOYD, Architect, 79 Colmore Road, Bir-  
mingham.

Schools.		Class-room.
Moffat . . . . .	£1,616 0 0	£56 0 0
Mills . . . . .	1,606 14 0	70 0 0
Lapcote & Sons . . . . .	1,549 0 0	53 0 0
Hughes . . . . .	1,536 0 0	77 16 0
Whitehouse & Jones . . . . .	1,469 0 0	60 15 0
Rice . . . . .	1,456 8 11	64 15 10
Bragg Bros. . . . .	1,454 0 0	87 0 0
Trow & Sons . . . . .	1,448 9 9	56 14 10
Briley . . . . .	1,443 0 0	56 0 0
J. Smith & Sons . . . . .	1,398 0 0	54 0 0
T. SMITH (accepted) . . . . .	1,299 0 0	47 10 0

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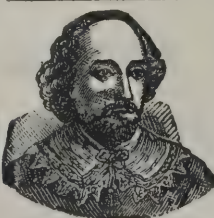
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This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper, under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring-boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

## BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION.

For coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent. more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of fresh and applied again. The composition is supplied dry, and only requires to be mixed with water to the consistency required for use. A horizontal boiler, 17 ft. 6 in. long, 15 H.P. gave the following results: Temperature on plates, 196 deg. ditto on covering 94 deg.; 1 ton of coal was saved per week, and although the fire was raked out every evening, 20 lb. of steam were in the boiler next morning. The following Testimonial refers to this covering:—

Offices of Wimbledon Local Board, Wimbledon, Nov. 23, 1883.  
Dear Sir,—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

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Is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire-escapes.

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For gas fires. This genuine Asbestos Fuel is composed of the finest hand-picked Asbestos, and its weight is about half that of any other Asbestos fuel.

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"Glasgow Herald and Engineering Times" Office, Glasgow.  
Mr. JOHN BELL 14th Nov., 1883.

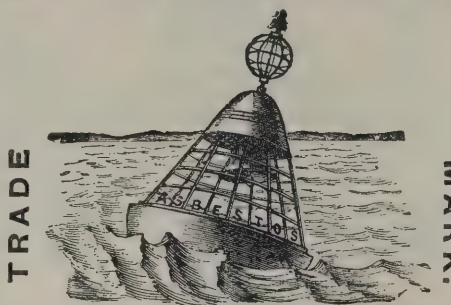
SIR,—As one of the means that helped to save the buildings extending from Buchanan Street to Michell Street from the recent great fire I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the "Engineering Times" case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of your Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood thrice coated with Irish Lime at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

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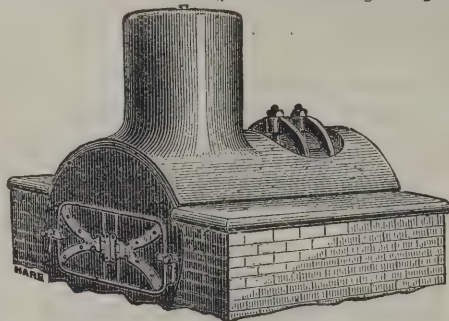
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Whitechapel Public Baths, June 8th, 1883.

Mr. JOHN BELL, 118 Southwark Street, S.E.  
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Yours truly, D. SHARP, Engineer.

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# The Architect.

## GLASS PAINTING AT THE ROYAL ACADEMY.



R. AITCHISON is certainly the right man in the right place when he is lecturing at the Royal Academy as the representative of those views which are becoming more and more popular with reference to the ancillary fine arts, their dignity and delight. It is more particularly with colour that he has occupied himself in his official capacity hitherto, as the outcome of a wide and liberal study of chromatic science in his private practice. But as there can be no doubt that he is equally competent to

deal with the other provinces of the whole empire of the "minor arts," we hope to find him in course of time taking up in a more systematic way one of these after another, upon which to discourse to the English art-world, at the headquarters of English art, in that peculiar spirit of piquant but solid and thoughtful enthusiasm which becomes him so well, and which has always given so much honest force to his sentiments.

We must bear in mind what the lectures at the Royal Academy are meant for. They are supposed to be the discourses of certain professors in an educational institution, whereby the students, by the help of rhetoric, are to be instructed by men of the very highest intellectual status in the mystery or mastery of the work to which they are devoting their lives. Actual practice under the direction of a teacher, in the *atelier*, or studio, or work-room however designated, is to be the means for their acquiring the handicraft; but an occasional exposition of the philosophy of the matter from the lips of a professed scholar is superadded, for the purpose of enabling them to grasp the greater principles of their subject, and to take into view the collateral prospects of knowledge, so that their particular skill may be anchored upon a groundwork of science, as well as supported by enlarged information.

As regards architecture, however, it has always been manifestly impossible for the titular "professor" of that art to do more than discourse as pleasantly as he could, in the form of four lectures in the year, upon some stately but superficial view of such architectural questions, more or less popular in their character, as he might be best able or most willing to venture upon, having regard to such considerations as the passing condition of the professional world, his own credit, and the nature of his audience. His audience, be it remembered, is formed of the whole body of the students of the Royal Academy, in painting, sculpture, and architecture indiscriminately, a good many absentees deducted, and sometimes a very few strangers added. Thus the lectures of Professor COCKERELL, now an old story, were the elegant gossips of a refined *dilettante* upon whatever subject of an eclectic character might come uppermost; those of SMIRKE were a heavier effort on the same lines; and those of EDWARD BARRY were still the same, if on a lower level; while SCOTT and STREET were actuated more by the partisan desire to substitute Gothic for Eclectic taste all round, and to force upon public attention a transitory passion which they fondly mistook for the one eternal basis of all art. Since Mr. STREET's death the business has got into a little confusion; and this year the short service of discourses has been placed chiefly in the hands of an amateur Egyptologist, Mr. AITCHISON coming after him with what he has to say upon the subject of glass painting. There is a real grievance here, no doubt, for those who are accustomed to complain of the treatment which the Queen of the Arts receives from the dominant painters of Burlington House; but for our own part we prefer to think that if Mr. AITCHISON, and perhaps others, were to be allowed for a few years to bestow upon the arts of decoration and ornament that fair share of academical attention which they have never yet received from any prominent artistic authority in this country, the public interest might be all the better served. At the same time we are quite of opinion that there is genuine force in the question why it is that Messrs. NORMAN SHAW, PEARSON, and WATERHOUSE, and indeed Mr. BODLEY also, should all be so very dumb. The duty of the Royal Academy towards the fine art of architecture is surely not

wholly fulfilled by the selection from amongst the successful designers of the day of half a dozen of the best, to have a distinctive, perhaps an invidious, handle attached to their names; some one at least of the fortunate number ought to be able to give a reason on the very highest ground for the faith that is in him; but of this we say no more.

Mr. AITCHISON, in giving a reason for the faith that is undoubtedly in him, draws a bold distinction between the "painters" who are so very well known and the "glaziers" who are not so well known, but whom he seems to regard as their superiors rather than otherwise. Coloured glass workers, that is to say, are with Mr. AITCHISON "glaziers," and the designation, if in common parlance otherwise appropriated, is at least in these days suggestive of the great fact that it is the man and his work, and not the name and pretension, that are to be honoured. The men by whose artistic device, artistic drawing, and artistic handiwork there are produced, in the luminous vehicle of coloured glass, such wondrous examples as we see at times of the felicitous conventional pictures and chromatic harmonies proper to the material, are not only artists, says he, as others are, but artists whose field of art is especially glorious. Their work is not the mere toy-work which so many people take it for—toy-work which the lecturer, in his own quaint way, contemplated for a single moment in the very low form of "the plaster church with a lantern inside"—it is the work of the "painter" glorified by his taking the bright effulgencies of heaven upon his palette instead of the dull chemical earths of the shops. The "glazier," therefore, if he be as worthy of the name of an artist as he sometimes may be, becomes a great artist instead of an artisan, and such an artist, perhaps Mr. AITCHISON would like to say, as we may hope one day to see occupying a seat, and indeed an honourable one, amongst the forty. Why do not our painters try their hand at glazier's work? he asked boldly; indeed he applied *argumentum ad hominem* still more boldly, and inquired if Sir FREDERICK LEIGHTON himself, sitting grandly in the chair before him, might not do his art more credit than some would expect if he were to rise to the occasion—to ascend rather than descend—and make an effort in the delightful work of the "glazier." For "the painter," said Mr. AITCHISON, amidst the genuine applause of his audience, "ought to be above all other things a colourist," and here is colour for him in its absolute perfection. Enthusiasm such as this is, in our opinion, by no means out of place. There is no lack of quaint enthusiasm in our day and generation; but this is something altogether better and more true to nature; and, if we do not mistake the tendency of cultured opinion, it is what is destined to be more and more accepted by the English intelligence as safe and sound criticism. The time is gone by for the obsolete formulæ of the Renaissance academies to exclude from scholarly rank all other arts but the three to which a MICHAEL ANGELO applied his powers on the elevated level of his Moses, his Sistine Chapel, and his Basilica of St. Peter; spurious exclusiveness of this order not only does more harm than good at any time, but does the utmost harm and no good at all amidst our modern associations now; and everyone may welcome, we are sure, without fear of its effect, the growth of opinion in the liberal direction of the widest comprehensiveness of artistic recognition.

It was to be observed that the body of students who chiefly occupied the theatre cheered Mr. AITCHISON with especial heartiness when he alluded to the particularly successful work of Mr. BURNE JONES at Oxford, as an instance in which the genius of a "painter"—perhaps in his heart he meant a somewhat wayward manifestation of genius, if measured by more ordinary standards—had found the fittest subject for its exercise in this exquisite work of the "glazier," committed to him under exceptionally favourable conditions. We do not attach much importance to the admiration of youth for eccentricity, but we read the echo of approval from Mr. AITCHISON's students on this occasion as an expression of a more wholesome sentiment. To be a painter specially adapted by natural idiosyncrasy for the peculiar conventionalism of the colour-glass picture, is what may be called an accident of a particularly happy character; and we can very well understand, if it ought to be so understood, that the *forte* of Mr. BURNE JONES might prove to be colour-glass work exclusively, if he could be persuaded to pursue it with the exclusive earnestness which Mr. AITCHISON considers to be worthy of the subject. Again we cannot help saying that enthusiasm such as is here brought into notice is, in our opinion, true art criticism.



In the old mediæval glass which, in so many instances, appears to be beyond all hope of emulation exquisite in both the melody and the harmony of its colour, it is very honestly pointed out by Mr. ARCHISON, amongst other things, that "dirt and decay" may take credit for a good deal of the charming effect. It is unfortunately the case in many other kinds of art besides glass pictures, that a certain obscurity produced by atmospheric corrosion and deterioration is not only accepted by connoisseurs as a beneficial "toning down" of the work, but is admitted by the most fastidiously graceful taste to be an unquestionable improvement. Mellowness takes the place of rawness, and this is the work of time. The same mellowness may be produced by artifice, but the result is an artificiality of tone which is unwelcome. It is not easy to account for this logically, however manifest it may be experimentally, and we may be content to think it cannot be helped.

Much more might of course be said upon the details of Mr. ARCHISON's pleasing lecture, but we can at present only once more congratulate the Royal Academy upon having acquired in the person of the latest Associate so true a representative of sound popular opinion upon the somewhat neglected arts of decoration.

## THE SURVEYOR'S MIND.

[BY A CORRESPONDENT.]

THE paper which was read by Mr. RICKMAN at the Surveyors' Institute (see *The Architect*, February 2) is, apart from its professional value, interesting, as it shows rather impressively how great an influence certain intellectual pursuits can exercise upon modes of thinking. Any one who is in the habit of noting mental phenomena must have observed that building surveyors, even in their ordinary conversation, are analytical, and that almost mechanically the simplest subjects are divided and sub-divided by them in a curious way. Mr. RICKMAN's paper is so thoroughly analytical that to find a parallel to it outside his profession it would be necessary to have recourse to dialectic essays. In his case it would seem that analysis is not altogether an acquired power. If we take as evidence the dissertation called an "Attempt to Discriminate the Styles of English Architecture," which was drawn up by Mr. RICKMAN's father in 1812, it is reasonable to conclude that the power was inherited. That famous essay is probably the most remarkable example of analysis in the language; for at the time when it was produced a Gothic building appeared to most men to be nothing more than a chaos of masonry. RICKMAN was able to classify the parts, and the four divisions employed by him to distinguish all varieties of English Gothic are never likely to be superseded. In its original form it occupied about forty pages, but there is a greater amount of information upon architecture in that limited space than in volumes which contain five times the quantity of printed matter. Look, for example, at the table in which some of the principal parts of Greek and English buildings are contrasted. Although it is well known to architects and to every one who has an amateur's interest in architecture, it is worth reprinting here in connection with this article, if it were only as an example of the logical conclusions which can be deduced as a result of a series of observations.

### Grecian.

The general running lines are horizontal.  
Arches not necessary.

An entablature absolutely necessary, consisting always of two, and mostly of three distinct parts, having a close relation to, and its character and ornaments determined by the columns.

The columns can support nothing but an entablature, and no arch can spring directly from a column.

A flat column may be called a pilaster, which can be used as a column.

### English.

The general running lines are perpendicular.

Arches a really fundamental principle, and no pure English building or ornament can be composed without them.

No such thing as an entablature composed of parts, and what is called a cornice, bears no real relation to the shafts which may be in the same building.

The shafts can only support an arched moulding, and in no case a horizontal line.

Nothing analogous to a pilaster; every flat ornamented projecting surface is either a series of panels or a buttress.

### Grecian.

The arch must spring from a horizontal line.

Columns the supporters of the entablature.

No projections like buttresses, and all projections stopped by horizontal lines.

Arrangement of pediment fixed.

Openings limited by the proportions of the column.

Regularity of composition on each side of a centre necessary.

Cannot form good steeples, because they must resemble unconnected buildings piled on each other.

### English.

No horizontal line necessary, and never any but the small cap of a shaft.

Shaft bears nothing, and is only ornamental, and the round pier still a pier.

Buttresses essential parts, and stop all horizontal lines.

Pediment only an ornamented end wall, and may be of almost any pitch.

Openings almost unlimited.

Regularity of composition seldom found, and variety of ornament universal.

From its perpendicular lines, may be carried to any practicable height, with almost increasing beauty.

To appreciate the labour that was requisite to produce the foregoing summary, at a time when the study of architecture was neglected, the reader need only make the attempt of adding other characteristics to it. Professor WILLIS did so, and found it no easy task. For every one of the statements represents in the first place a vast number of single observations, and, in the second place, insight and judgment are needed to give as it were the essence of the facts. That the latter part of the process may be attended by uncertainty is evident from the erroneous conclusion that a Gothic shaft sustains no weight, and is merely an ornamental appendage. THOMAS RICKMAN's analytical skill is apparent in almost every line of his "Attempt," that is, if the earlier editions are consulted; in the later editions his remarks are almost lost amidst the comments of other writers. In respect of that capacity, there is a family likeness between the "Attempt" and the paper on "Building Risks and their Incidence," although they are separated by an interval of over seventy years. Everything that appears to be compound is resolved as far as practicable into something simpler. The paper starts by dividing risks into two classes—those of builders and of employers. Then each class is again divided, and so on throughout to the end. The ultimate effort of analysis is to resolve many things under two heads, and Mr. GLADSTONE's famous three courses can sometimes be thus exemplified. Mr. RICKMAN has a fondness for this duality, but his classifications are not so apparent in the newspaper report as they were in the original manuscript.

Our object is not, however, the consideration of Mr. RICKMAN's excellent paper in its details. We have referred to it because it is in its way as characteristic a product of a surveyor's mind as the most elaborate bill of quantities. What most concerns us is the process exemplified. Now we have no hesitation in saying that analysis, although most useful in its way, is, like most other good things, accompanied by drawbacks. One of these is a weakening of the creative power. A man may possess great skill in analysis, and in some mysterious way be unable to construct the things which he knows in their elements. There is a remarkable example found in the history of the genius who brought logical analysis almost to perfection. In ARISTOTLE's "Poetics" we seem to have the whole secret of all kinds of poetry made as plain to the understanding as the items in a surveyor's "bill," but it does not appear that the philosopher was able to compose a lyric. The law which operated in the case of the Greek philosopher is still in force. When attention is given to dissection, there is an end to creation. To recur again to the example of RICKMAN, we see the man whose knowledge of Gothic details was so remarkable producing buildings to which no student would have recourse for inspiration. And the reason is not obscure. The analytical mind is prone to consider parts by themselves, without giving any thought to the relation between them. A building surveyor is indifferent to the appearance of the building with which he is connected, and one might go so far as to say that in many cases quantities are taken out without any effort being made to realise the form of the building as a whole. If there is a perspective it can hardly escape notice, but in its absence a substitute will rarely be constructed in the surveyor's imagination. The incompatibility between the surveyor's process and that of a designer is an every-day experience. In country towns it is not uncommon to find architects employing surveyors to take out quantities, although they themselves are



competent to undertake the work, and are not well able to afford the expense of an extra assistant. But they feel that a week or two in quantity-taking unfits the mind for the work which should be more worthy of an architect's attention. Mr. RICKMAN in his paper acknowledges this, when he says that "the business of a measuring-surveyor is a branch of architecture not conveniently carried on by the same person who is engaged in designing," and he might have added that the difficulty does not arise altogether from inconvenience, using that word in the ordinary sense, but from something that is inherent in the human mind.

At the present time it would be an advantage if the difference between their capabilities could be realised by surveyors and architects, and, what is no less important, by the public. If it were, it would prevent encroachment among the former, and it would enable clients to be more discriminative in the bestowal of commissions. The necessity of skilled supervision is generally recognised; but it is also supposed that the so-called "practical men" are best fitted for the office, and, owing to the influence of a common fallacy, surveyors are accepted as their representatives. In Government departments there is a belief that surveyors are excelled by officers of Royal Engineers.

### MESSRS. J. TYLOR AND SONS.

VISITORS to the metropolis, as they journey from Holborn to Cheapside, can hardly fail to observe the lofty tower which rises far above the buildings between Newgate Street and Paternoster Row, and which in height, if not in size, competes with St. Paul's as a landmark. It is often supposed, and even by Londoners, to belong to the neighbouring prison, and to be a ventilating shaft or an observatory. But the tower has been erected by Messrs. TYLOR & SONS, and is a part of their premises. To any one who is acquainted with the character of the work produced by the firm, its existence is suggestive. The tower is simply a colossal testing apparatus. It was considered necessary that sluice valves, stop-cocks, pipes, and other things, should be subjected to an enormous water pressure, and accordingly means were adopted by which one of 600 feet can be applied. Hence the tower arose. The aim of Messrs. TYLOR & SONS is to produce goods which can be trusted as corresponding with their descriptions, and to insure that end, time, skill and money are expended liberally. Their water-tower is like many expensive machines, which may be seen in the workshops, and forms part of a system that governs the production of the smallest taps and plugs, and gives them a special character.

Messrs. TYLOR & SONS are sometimes described as "engineers and brass-founders," but they are essentially hydraulic engineers. Almost everything produced in the Newgate Street works comes in contact with water when in use. Pumps, fountains, syringes, waste preventors, garden engines, hydraulic rams, baths, stand pipes, hose, meters, traps, basins, closets, cisterns, boilers, lavatories, urinals, flushing apparatus are among the objects made by the firm, and they are all intended to have water flow through them. Let a supply exist, and there is nothing connected with the distribution of water, either within or without a house, which cannot be supplied and made by Messrs. TYLOR & SONS. From their own stock they can furnish the sluice valves which open and close the mains, the meters which register the quantity of water that leaves the reservoirs, and the tools which are needed for the repairs of all pipes. In the comprehensive establishment in Newgate Street, everything that can be called hydraulic seems to be available, from a steam-engine for pumping machinery to a cock for a kitchen boiler, from a spray bath to a washer, from a ship's fire-engine to a tap wrench. A professor might with advantage use the general catalogue of the firm as a text-book to explain the latest developments of practical hydraulic and sanitary engineering. It is only in our time, and in England, that such a business could exist. Elsewhere drainage and water supply are more simple affairs.

There is nothing about the exterior of Messrs. TYLOR'S premises which indicates the variety or the importance of what is to be seen inside, and the frontage is small in comparison with the area of the works. On entering, one sees that there is no attempt at display. The long passage is flanked by pumps of all descriptions. Then a hall is reached, which is filled with examples of sanitary appliances. Other depart-

ments and workshops are further on. The lighting is good, and everything can be seen clearly, but it would need a volume to describe the specialities. Messrs. TYLOR'S catalogue of 1879 contains about five hundred pages, and one which is in preparation will be still larger. All that can be done here is to suggest the importance of the department in which our readers are most concerned—that relating to house drainage and sanitation—and leave the reader to examine the objects with his own eyes.

The water-closets may be allowed the first place, from their sanitary importance. They range from the simple hopper to elaborate seat-action and door-action closets. In the "Side Outlet Regulator Valve Closet" the outlet-valve can act as an overflow escape, and retain sufficient water to be sealed. If the water-flush should fail, there is a self-acting arrangement which closes the overflow passage against sewer gas. Another regulator valve closet, known as the Rogers Field Pattern, is made, without an overflow, and the patent parallel motion allows the handle to be drawn in a direction that is nearer the perpendicular than is possible with the common arrangements. Some of the closets are made in such a way that the trap need not be under the level of the floor. They are consequently available for rooms with cement or other fireproof floors, as they may be fixed without entailing much damage to the floor. The basins are generally made with Messrs. TYLOR'S patent flushing rim, which is a great improvement on the fan and most other inlets.

One appliance, which is generally applicable to closets, is Messrs. TYLOR & SON'S Patent Waste-not Regulator Closet Apparatus. As the name implies, it has been devised in order to prevent an useless waste of water. If the handle of a closet is propped up not more than the prescribed quantity of water can pass through the basin. The firm have, it may be said, patented a great many waste preventors, which have been adopted by London and other water companies. In fact Messrs. TYLOR & SONS have a great advantage over their rivals from the character of their business, which, although so various in its application, has a principle in common. If an improvement is introduced in closets it may be found applicable to lavatories and baths, and *vice versa*. The details of all the appliances in consequence come under the observation of a great many experts in various departments, and endless opportunities are given for the attainment of perfection in working. In this way a scientific precision has been gained that is remarkable.

The baths are deserving of attention both on account of the material employed and of the arrangements for the inlet and outlet of the water. The iron of which the baths are made is first tinned and then galvanised, and it is claimed that this process produces more durable baths than those made of ordinary galvanised iron. Although strong, the baths are not of excessive weight. One kind, which may be termed the non-fixture bath, is of much importance to tenants who may have to remove. The pipes are so arranged that a return of soiled water into the bath is an impossibility; and, by means of the patent lock-waste apparatus, the waste-valve cannot be opened whilst either of the inlet-taps are running, nor either of the inlet-taps be opened until the waste-valve is closed. Among the specialities which Messrs. TYLOR have introduced for their baths, the following may be mentioned:—The quick waste-valve, by which the water is quickly discharged, and there is no risk of choking-up; the apparatus for combined shower and douche; and the patent boiler, which is easily fixed, and affords a supply for a bath in a room below the level of the cistern. The entire arrangements are so perfect that the luxury of bathing becomes enhanced by means of them.

It has been often remarked in international exhibitions that, while ornamental brasswork, whether on a large scale or for cabinet work, is produced in excellent style by foreigners, the humble but more useful plumbers' foundry work is far inferior to the English. The cases in Messrs. TYLOR'S showroom contain gun-metal, yellow metal, and silvered cocks of all sizes and varieties, which would hold their own in any competition. Some are made to resist extreme pressure, and among the improvements introduced is a patent grooved joint, by which junctions or attachments with a pipe can be made without soldering, and by a common labourer. The purchaser knows exactly what he may expect in using one of those cocks, and no attempt is made to confer imaginary qualities upon them. The prices charged are most reasonable, considering the quality



of the work, and that the taps are finished by men instead of by girls. By making plumbers' brass-foundry a part of their business, Messrs. TYLOR are enabled to introduce valves and taps for their baths, closets, and lavatory basins, in greater variety and having more efficiency than if they were dependent on a supply from provincial manufactories.

It is satisfactory to learn that the demand is increasing for work like that which is produced by Messrs. TYLOR, for their appliances can hardly coexist with scamped brickwork and carpentry. Unfortunately there is a tendency at the present time among many people to make cheapness the paramount consideration in arranging for builder's work. In consequence we have in the markets plenty of so-called sanitary appliances which from their price become attractive to all who are indifferent to the importance of good materials and workmanship. So long as people are willing, for the sake of a spurious economy, to employ those things, and live amidst discomfort and danger, they will be made. The jerry-builders and the selfish speculators in showy but flimsy houses can always find accommodating manufacturers who will supply, and on reasonable terms, appliances that present at first all the outward appearance of being useful. But it is needless to say that men of that class do not patronise such houses as Messrs. TYLOR'S, and they would seek in vain through No. 2 Newgate Street for closets, baths, or traps that would meet their sordid requirements. It becomes, therefore, a sort of indication of the value of a building when one can recognise the productions of Messrs. TYLOR among the fittings. The value of their work has been tested during many a year, and it may be accepted as indubitable that their sanitary appliances confer the security which is necessary in every house that claims to be healthy.

#### PARIS NOTES.

THE Museum of Decorative Art at the Palais de l'Industrie reopens to-day, March 1. Amongst the features of interest added since last year is an important collection of the works of M. P. V. Galland, and another of original cartoon sketches by M. Lechevallier-Chevignard, both of which are valuable contributions to the study of art as applied to modern decoration. One new room contains several classes of embroideries and other textile fabrics, and another is devoted to Oriental porcelain, ivories, bronzes, and lacquer work, from the collections of MM. Antonin Proust, P. Burty, Bigot, Dillon, Froudin, and Count Kleczkowski.

The Salon Committee is now busy preparing for the coming exhibition, which will open as usual on May 1. Paintings and drawings must be sent in to the jury between March 5 and 15, sculptures and medals between March 21 and April 15, and architecture, engraving, and lithography between April 2 and 5.

The French artists, MM. Detaille, de Neuville, de Vuillefroy, Dubufe, Gervex, Lansyer, and Alfred Stevens, have consented to form part of the Fine Arts Jury at the International Exhibition to be held in the Crystal Palace.

M. Benjamin Ulmann, Grand Prize of Rome and Knight of the Legion of Honour, is recently deceased. M. Ulmann, who was well known as a painter of classical subjects, was an Alsatian by birth, having been born at Blotzheim in May 1829. One of his chief works is *Sylla and Marius*, which was bought for the State, and is now in the Luxembourg Gallery. The mural paintings in many of the public buildings in Paris, and notably those in the great hall of the Conseil d'Etat, are reckoned amongst his finest efforts. One of his drawings, *Cato in the Senate*, was reproduced in *The Architect*.

It has been decided to establish a lift between the ground-floor of the Palais de l'Industrie, where the sculpture exhibits of the Salon are placed, and the first-floor picture galleries, so as to afford easy access from one section to another for the infirm and paralysed, who have hitherto been prevented from enjoying the annual exhibitions owing to the difficulty of climbing the stairs. Such at least is the reason given by the Paris papers in announcing the improvement.

A first portion of the Castellani collection of pictures and antiquities is announced for sale at Rome on March 17, and the bidding is expected to occupy at least a month. According to the *Rappel*, Mr. C. T. Newton, C.B., of the Greek and Roman Antiquities Department at the British Museum, and two conservators of the German State Museums at Berlin, have been sent to Rome by their respective Governments to make purchases. France will not be represented, in consequence of the inadequate credit voted for such acquisitions (only 150,000 frs. for the eight departments at the Louvre). The remainder of the collection will be disposed of in Paris during the month of May.

In view of the small amount voted annually for the Caisse des Musées, a petition is being numerously signed in favour of establishing one paying day per week in all the State museums—the whole receipts to be devoted to the acquisition of new treasures.

On the suggestion of M. Kaempfen, Director of Fine Arts, the Minister of Public Instruction has decided upon the appointment of a special Committee of Works of Art (*Comité des travaux d'art*), whose duties it will be to examine the designs or models sent in for the decoration of public buildings, to choose the works to be acquired by the State in each year's Salon, to classify copies of celebrated pictures, and to examine the works of artists who have gained a Prix de Salon or a travelling scholarship.

We are glad to learn that M. Hébert, the well-known painter, who had been in very delicate health for many months, has just returned from Nice completely restored, and was present at the last meeting of the Academy of Fine Arts.

M. Christophle, Governor of the Crédit Foncier, has been called to give evidence before the Commission of Inquiry into the industrial crisis. He stated that in the building trades of Paris there are about 25,000 contractors, including the small employers of labour. Many of these combined, but often with inadequate capital, and they then borrowed money to carry on their operations. M. Christophle denied that six or seven milliards of francs had been laid out in Paris on new buildings within the past six or seven years, and estimated the real sum expended at 1,200,000,000 or 1,300,000,000 frs. (48 or 52 millions sterling). The advances from the Crédit Foncier had increased in amount only since 1880, when they totalled 40,000,000 frs., as compared with 151,000,000 frs. in the following year. Four-fifths of the new tenements were occupied, and he urged that any discouragement of building operations at the present moment would merely aggravate the crisis.

The decision of the Court in the Trouillebert-Fedesco case (referred to in *The Architect* of last week) was delivered on Saturday last by the Judge-Substitute, M. Rouillier. In giving judgment, he clearly defined the distinction existing between that part of the copyright of a book or work of art which is sold by the author for the use and benefit of the publisher or dealer, and that other part which remained the property of the former in despite of the sale. This was adjudged to be the title of the work itself and the reputation, whatever it may be, attaching to same. On these grounds the decision was necessarily in favour of M. Trouillebert on all points.

The candidates for the seat left vacant in the Académie des Beaux-Arts, by the decease of M. Lesueur, have been classed in order as follows by the architectural section of that body:—MM. Diet, Daumet, André, Normand, Magne, and Renard. The first-named will probably be elected.

#### POISONOUS PIGMENTS AND WALL-PAPERS.

ABOUT a year ago the National Health Society solicited Earl Granville to instruct the representatives of the Foreign Office abroad so that they might obtain reports respecting foreign enactments for the limitations, restrictions, or safeguards in the manufacture, use, and sale of arsenical and other poisonous colours used for wall-papers and other decorative purposes. A circular was accordingly addressed to the representatives by His Lordship. The reports which were received have been printed, and will be found interesting to sanitarians. The following abstract will suggest the state of opinion on so important a subject:—In Austria



there is no direct prohibition against the production of arsenical and other poisonous pigments; but the manufacturers require a license and special permission for the establishment of such a business, and precautionary measures have to be adopted by them for the protection of the workmen. The Austrian authorities are considering certain proposed stipulations by which the employment of colours made of arsenical substances will not be allowed in artificial flowers, wall-papers, coloured paper, and dressing stuffs, and the importing of all articles in which arsenical pigments are used is to be illegal. An Imperial law was passed in Germany in 1879 in order to regulate the sale of all articles containing poisons, but there has been more or less uncertainty about the interpretation of some of the enactments. A committee of the Reichstag have recommended that the words "prepared with arsenic" should be used instead of the words "containing arsenic," as by this means colours only to which arsenic had been added would be forbidden, whereas others containing very slight blendings of arsenic through accidental circumstances, such as earth colours, would be permitted. In the decree of the Emperor which came into force, it is accordingly ordained that the use of "colours prepared with arsenic" is forbidden in the manufacture of paper-hangings. The punishment for contravention is severe, and, in case of severe bodily injury or death to a human being, it may extend to five years' penal servitude. The Imperial law in no way interferes with the regulations which have been adopted in the several states. In Baden not only are arsenical wall-papers illegal, but there is a prohibition against the tinting of walls or ceilings of dwelling-houses or factories with arsenical compounds. The Hessian police code imposes a penalty of from one to thirty florins on any person who, for the purpose of furnishing or covering the walls of any dwelling-room employs paints, wall-papers, or stuffs tinted with any of the pigments which are designated as "injurious to health" such as Scheel's green, Schwemfurt green, and King's or Naples yellow, and all colours containing arsenic, or combinations of arsenic. The use of these colours for tinting furniture is likewise prohibited. Regulations against arsenic and other dangerous paints have been in force in Saxony for many years. In 1856 the people were warned against a red pigment known as Munich red, cochineal red, and Pernambuco lake (Brazil red), and used for paper-hangings, coloured paper, and for staining. Again in 1868 a warning was issued against window-blinds coloured with various arsenicated pigments, which, being applied in a very superficial manner, were easily detached from the blinds as powder, so that the air became impregnated with poisonous molecules. According to the Saxon authorities, poisonous colours are prejudicial to health when not properly applied to the surface of the papers, or when not smoothed down or not varnished; or if the hangings are applied to damp walls to which they do not hold firmly, so that the pigment is liable to flake or dust off. But those colours are innocuous when applied to the walls of rooms if the walls are and remain dry; if the wall is dry before the painting, and the lime used is mixed with milk not over-diluted, or the colour when dry is washed with a suitable fluid, such as water-glass, &c. Colours of this class, especially the more injurious, viz., the greens and blues, should be altogether excluded from sleeping apartments, as well as from workrooms in which the air is highly saturated with aqueous vapour, or impregnated with the fumes of vinegar, ammonia, chlorine, sulphuric acid, &c.

Poisonous colours when used in carpets or wall-papers are attended by exceptional risk in Sweden, as the inhabitants live during winter in apartments which are almost hermetically sealed. A statute was issued by the King in 1876, which prohibits the manufacture and importation of arsenious acid or white arsenic in Sweden unless the royal permission has been obtained. Wall-paper, window-blinds, Venetian blinds, tissues, artificial flowers, or other articles in water-colour, printed or painted in colours containing arsenic, are not to be kept or offered for sale. An elaborate list of poisonous colours has been prepared by the Swedish Board of Health, but the term "poisonous" does not seem to have a strict definition. Thus, for example, we find among the white colours considered to be obnoxious, bismuth white and zinc white, while a note states, "These colours when used as paints are perfectly harmless. Bismuth, even when followed in large doses, is inert, and the substitution of zinc whites, albibissima, Charlton white, silicate paints, &c., for white lead is much to be desired." It is also said that arsenic has been discovered in other colours besides the green-copper colours, such as some of the most beautiful of the red-drop colours, various grey colours used in printing wall-papers, and in tar colours. According to the law of Denmark, arsenical preparations may not be used for staining, dyeing, or colouring stuffs, window-blinds, Venetian blinds, artificial flowers, lamp-shades, paper, &c., nor form part of a pigment mixed with glue, gum, size, dextrin, white of egg, &c., for walls of rooms or wall-papers.

The Russian code of laws prohibits the importation as well as the manufacture in Russia of all wall-papers which are covered with a thick coating of arsenical colouring matter, both opaque and glazed. There is an exception in favour of paper in which the pattern is traced in arsenical paint on a more extensive ground of non-arsenical colouring matter. Lists of injurious colours and harmless colours have been prepared, and the following plain

method for detecting the presence of arsenic in articles coloured or dyed has been issued:—

For the purpose of testing green and other wall-paper, in which the presence of arsenic is suspected, a small piece of such paper should be taken and cut into shreds, which are then to be placed in a wine-glass. If the object of examination be colouring matter, a piece of the size of a pea should be taken and treated in the same manner; if a piece of tissue is, under examination, a small shred of it should be cut off. The piece of paper, dye-stuff, or tissue must be treated with caustic alkali (solution of ammonia), a teaspoonful of which must be poured over the object of examination. The liquid will assume a blue colour, and, after five or ten minutes, half a teaspoonful of pure hydrochloric acid (chemically pure), which will give the liquid a light green hue, must also be poured into the glass. Finally, a piece of copper, or a copper coin, previously polished with sand, is placed in the green liquid. If after the expiration of five minutes the copper shows on its surface a grey, glistening deposit, then the wall-paper, dye-stuff, or tissue contains arsenic; but if the surface of the copper remains red, there is probably no arsenic present. It must, in addition to this, be observed that all articles coloured with arsenical paints emit, when burnt, a smell of garlic.

While so many countries have adopted measures to protect the inhabitants against poisonous colours, there are others which are as indifferent as England. France has no regulations except in the case of articles of food, beyond a circular which has been issued by the Minister of Commerce cautioning manufacturers, and explaining the responsibility they would incur in the event of accidents arising from the use of poisons. Belgium is also without a decree to restrict or regulate the manufacture, use, or sale of arsenical or other poisonous pigments employed in industry or in the decorative arts. The same may be said of Greece, Italy, Holland, Portugal, Spain, and Switzerland. There is no federal law on the subject in the United States, and it may also be asserted that there is no State legislation or municipal enactment bearing on the matter.

## THE LOCAL GOVERNMENT OF THE METROPOLIS AND STREET ARCHITECTURE.\*

(Continued from page 126.)

LET us now consider the works of that younger body—the Metropolitan Board of Works—so far as they have relation to the subject the consideration of which has called us here this evening. Although in existence as a corporate body only twenty-eight years, it must be admitted that the amount of work achieved by them in the way of street improvements and otherwise is immense. Setting aside for a moment the main drainage of the metropolis, the embankment of the Thames north and south, the formation of public parks, the freeing of the metropolitan toll bridges, and the securing beyond the reach of rapacious owners and the ever-advancing speculative builder such open spaces as Hampstead Heath and Clapham Common, the facilitating of traffic from one part of the metropolis to the other by the formation of new streets, and the widening of existing thoroughfares, has received very considerable attention at their hands. Many of these street improvements are of first-class importance. I have only to name the following to insure your being in accord with me in this view—Garrick Street, Southwark Street, Queen Victoria Street, Northumberland Avenue, the new street ultimately destined to become the leading thoroughfare from the east to the west of London, commencing at Bethnal Green, at present carried as far west as the corner of Hart Street, Bloomsbury, and soon to be followed by a continuation to Piccadilly Circus. Nor must we overlook such minor improvements as the removal of Middle Row, Holborn; the widening of Tooley Street, High Street, Wapping; Kentish Town Road, High Street, Kensington; and that much-needed improvement the widening of Gray's Inn Road, involving as it did in its execution the removal of the wretched courts, alleys, and slums which had only too long been a plague spot and disfigured the map of London in its very centre.

In a busy commercial centre like London the truth of the saying "time is money" is proved more conclusively than in places where commercial activity is less pronounced, and there can be no more sure means of economising time than in reducing the distances which have to be traversed in proceeding from one part of town to another, and insuring that the thoroughfares over which we have to pass are free from obstruction. Little can be said in adverse criticism of the street improvements I have named, either in regard to their direction, width, and improved gradients, their general conception and laying out; and the Metropolitan Board of Works have earned the thanks of Londoners generally by doing so much to relieve the congested state of the street traffic. It is only when the improved street surfaces have been formed and the cleared land is covered with new buildings, that we notice what may be termed errors of omission—omission to insure that the

\* A Paper by Mr. L. H. Isaacs, read at a meeting of the Architectural Association.



new buildings shall be worthy of the sites on which they are to be located—sites, be it remembered, which have been acquired at an enormous cost to the ratepayers. To all who are acquainted with London, and have watched the growth and completion of the street improvements effected within the last quarter of a century, this omission to exercise proper control over the designs of the new buildings will have been noted only too frequently. I may be told that it is desirable at the earliest possible moment to obtain a recoupment of the money, or some portion of the money, expended in the formation of the new thoroughfares, and with that object to let or sell the cleared land as quickly as possible. Yet granting all this, it must surely be admitted that the land should not be parted with, and all control over it given up, until some security was obtained that the sites would be adequately covered, and that we should be spared the pain of looking at buildings which, so far from deserving to be located in first-class thoroughfares, are scarcely good enough to be relegated to a third or fourth-class street. I have only thought it necessary to produce to you a single instance of a block of buildings to illustrate this section of my subject, but I am afraid had I been so minded I could have repeated that class of illustration only too often. I have had a photograph taken of a block of buildings recently erected on land cleared by the Metropolitan Board of Works, for a street improvement costing a million and a quarter sterling to accomplish. Yet after an outlay so vast the Board allowed a site of the cleared land to be so covered as to produce the "vision of beauty" which is presented in the photograph. I have no hesitation in showing this photograph, because I am persuaded no member of this Association, nor, indeed, anyone worthy of the name of architect, could have produced an elevation so hideous.

In one of the recent street improvements undertaken by the Metropolitan Board of Works, viz., Northumberland Avenue, Parliament thought it necessary somewhat to strengthen the hands of that body in respect to vetoing or modifying the designs of buildings intended to be erected on the cleared land in the street. A clause was inserted in the Bill giving the necessary powers to proceed with the improvement, by which it was enacted that the Royal Institute of British Architects should have the design of every building to be erected in the Avenue submitted to its Council for any observations or suggestions that body might wish to make with regard thereto. The clause has proved practically valueless, because it did not go far enough in the event of the Council of the Institute declining to approve a design or suggesting modifications therein. There was no penalty for non-compliance with the requisitions of the Institute, and I regret to have to say that members of the profession who sign F.R.I.B.A. after their names, have been so disloyal to the body to which they belong as to pay no attention whatever to the suggestions made by the Council of the Institute in respect of designs prepared by them for buildings in Northumberland Avenue, and in some instances have proceeded with utter disregard to all that the Council have advanced. It is not much to be wondered at that, if great corporate bodies like the City of London and the Metropolitan Board of Works should fail to succeed in obtaining suitably designed buildings on land which they may clear for street improvements, and that the artistic treatment of our leading thoroughfares should suffer in consequence, when it comes to the turn of the smaller bodies—the vestries and the district boards—to operate in this direction, their failures are still more pronounced. But it is in sculpture, in the statues erected to our public men, that we commit the direst mistakes. Who can pass the Peabody statue at the back of the Royal Exchange, or, horror of horrors! that permitted to be erected near Mornington Crescent to perpetuate the memory of Richard Cobden, without a shudder, or uttering an earnest prayer that in these matters Londoners should no longer be able to boast of their local self-government? Who regulates the height of new buildings with regard to the width of the streets on which they front? The Metropolis Local Management Act contains provisions in regard to this essential particular, but they apply only to new streets. But what is a new street? Can a street be considered old, or, indeed, a street at all in the ordinary acceptance of the term, until buildings have been erected on each side of it and for its entire length? Surely some such provision as that set out in Section 85 of the Local Management Act should have been made in the case of a street like Victoria Street, Westminster, where, although the roadway was formed and dedicated to the public prior to the passing of the Act in question, the land abutting on it was not built on for many years after. I am induced to make this observation through noticing the gloomy cavern-like effect produced by the buildings erected in this street, which largely exceed in height the width of the thoroughfare. One can understand that in order to exclude the fierce rays of the sun in such cities as Constantinople, Cairo, or Algiers, the streets therein should be of the narrowest possible width at the pavement level, and the space between the houses still more contracted by overhanging floors, so that at the top storey it might be possible for the opposite neighbours to shake hands out of the window, but, alas! in England the sun is only too frequently conspicuous by its absence, as is proved by the return recently made by the Astronomer-Royal that there have been three entire weeks since Christmas last when the registered sunshine

was nil. Victoria Street, Westminster, for the greater part of its length, is quite dull and gloomy enough owing to its stucco fronts, without having its dullness intensified by the excessive height of the buildings which have been erected on each side of it.

To go back once more to the time "when George the Fourth was king," and contrast this street with Regent Street, one has again to make the sorrowful admission that we have not advanced very much, if at all, in our modern street improvements. It is the custom of many in our profession to sneer at John Nash; to deny that he was an architect, or at any rate utterly to repudiate his claim to the title of "King of Architects," by which he was too fulsomely proclaimed at the time when Regent Street and Regent's Park were being formed. Well, if not a king amongst architects he was certainly a prince among surveyors, and his plans for the formation of Regent Street and the laying out of Regent's Park were, to my mind, eminently skilful. I do not for one moment defend his stucco fronts, which did so much to ruin the art of bricklaying—his sham columns, pilasters, entablatures and pediments—but I do maintain that Regent Street was and even now is one of the pleasantest streets in London through which you can saunter, and this is largely due to the fact that the heights of the houses in that street as he designed and left them in no instance exceeded the width of the street, and there was consequently abundance of light and air. The only mistake in this particular which he made was the Quadrant—in itself very picturesque and effective—but owing to the gloom it created on the ground floor, the impossibility of carrying on business in the shops for the greater part of the year, except with the aid of artificial light, and for other reasons which need not here be referred to, it had to be abolished. One has only to notice and contrast the effect upon one's spirits in walking down Regent Street as compared with that produced by a walk through Victoria Street, Westminster, and it will be admitted that legislation as to the height of buildings in relation to the width of the streets on which they abut is most essential.

Who is responsible for insuring us reasonable facilities for obtaining a good sky-line to our buildings? We all know its value. Reminiscences of charming holiday tours in Normandy, Belgium, and Holland flash across the brain as we dwell on this subject, and pictures of the lovely quaint roofs, gables, and chimney-stacks to be met with in those countries arise in our mind's eye as we pursue the theme.

There were no telegraphs or telephones in the days when those sky-lines were produced, and a good thing too, the lovers of the picturesque will exclaim. But is it not possible to control the hideous effect produced by the overhead wires, which are fast becoming not only a source of positive danger, but also tend to still further obscure the little sunlight we get in London?

Deputations of parochial authorities have waited upon Sir Charles Dilke in his capacity of President of the Local Government Board, asking him to interfere; and to them he replied there was no necessity for action on his part, nor for further legislation on the subject, as the governing bodies of the metropolis already possessed the requisite powers to deal with the matter. Yet they do not, and the evil continues to increase.

Let me give you some idea, by a photograph which I have had taken, of the magnitude of the evil which I am now describing. In the discharge of my duties as a director of a public company I am called upon to sit in a room on the first floor of a house in Victoria Street, Westminster, for a couple of hours once a fortnight, and I am made to gaze upon the hideous structure erected on the roof of the building which faces me on the other side of the road, and which supports the overhead wires represented in the photograph. I am told that this is by no means as unsightly as some erections for the like purpose which have been set up on the roofs of buildings in the City, where the wires are still more numerous than at Westminster. What chance can an architect have of producing a good sky-line in any leading thoroughfare of London, if his building is made to support an erection so hideous as those to which the Postmaster-General and the telephone companies are familiarising us? There can be no possible excuse for so disfiguring London streets except that of economy, for it cannot be denied that, but for the extra expense involved, the wires could be just as well laid under the footpaths as over the housetops. Surely there should be some check imposed even upon so exalted a personage as Her Majesty's Postmaster-General, and æsthetic principles might fairly claim to have some amount of respect shown them by competing telephone companies.

The PRESIDENT in inviting a discussion said the feeling produced on his mind was one of utter sadness, and he could not but feel the slough of despond into which street architecture was thrown. There seemed no escape from bumbledom in this country.

Mr. W. H. ATKIN BERRY, the hon. secretary, said it was more than discouraging that in an age when art was made so much of, and so much talked of, that the public should allow magnificent sites to be spoiled for generations to come. They would, he thought, be able to do little till they could fix responsibility on some one for these egregious mistakes. He proposed a hearty vote of thanks to Mr. Isaacs for his paper, as also for the photographs he had had specially taken to illustrate it.



Mr. L. C. RIDDETT agreed that the Farringdon Street neighbourhood had not been improved by being cut off from the main city and metropolitan thoroughfare. The system of leaseholds had much to do with the state of our street architecture. The Metropolitan Board of Works' regulations were also answerable, as they cut them off from all picturesque projections, and tabooed the use of bay windows. With regard to the latter, there need not be any risk of fire if a sufficient distance were left between them. Londoners who lived over their shops must have a dull time of it, the only view allowed them being that of over the way. Compare Oxford Street with the High Street at Oxford or the street at South Guildford. The difference of appearance was as striking as could be conceived. The Queen Anne style, if it had given them no more than red brick, would have deserved their thanks, for the question of colour was an important one in regard to street architecture. He had no idea that a new municipality would improve matters at all. The laying out of streets and boulevards required, if not a trained mind, at any rate a cultured mind. In Nash's days things were better, when design seemed to have formed part of every gentleman's education. It seemed to him that if they had a municipal body elected in much the same manner as the London School Board, the chances were that they would not get a higher type of men. As to the School Board, barring their buildings, no one could say they were doing anything they ought to do; they were not teaching the children, they were not keeping them out of the gutter. They were doing nothing they were expected to do.

After some observations from Mr. Brodie and Mr. Hunter, the vote of thanks was formally put to the meeting, and Mr. Isaacs replied.

On the proposition of the President, Mr. J. D. Sedding was then elected a member of the Association by acclamation, and the proceedings terminated.

### THE FABRIC OF WESTMINSTER ABBEY.

FOR some time past, says a writer in the *Times*, it has been known that the fabric of Westminster Abbey is in a condition requiring the most extensive repairs. The interior, indeed, is in good order, and it may be hoped that a long time will elapse before any further restorations are necessary to it. But with the outside the case is different. Beneath the coating of grime and dirt with which long ages have covered the structure, and which conceals the decay from the eye of the casual passer-by, there has been long going on a process of decomposition which, if not arrested, must speedily cause the ruin of the building. The Dean and Chapter, well aware of this state of things, have taken measures to be fully and exactly informed of the extent of the danger, and have long been casting about for a means of meeting it. In March 1882 they received a report from Mr. John L. Pearson, R.A., the well-known architect, on the state of the Abbey, which was by no means calculated to set their fears at rest. As this report has now been for some two years before the authorities, there is no indiscretion in our mentioning the principal points of it. Mr. Pearson begins by discussing the history and condition of the clerestories of the nave and transepts, and describes the work as left by Sir Christopher Wren in the beginning of the last century. He charges Sir Christopher, who had undertaken the external restoration of the Abbey, with having cut back the wall surface two or more inches—a treatment which could hardly have answered with the best weather-stone, and which was certain to fail with the softer free-stone that had been used throughout the Abbey. For the credit of Wren, however, it may be remarked that Mr. Pearson's judgment is contradicted by an express statement of Wren's, who, in a letter dated June 1713, when he was a very old man, declares that he faced the walls with Burford stone. It is difficult to decide between two statements that contradict one another so flatly; but whether Wren cut back the face of the walls or not, his restoration of them has not proved very successful. Wren also cut out and replaced the free-stone window-jambs and other features, and apparently in several cases altered the lines in the old mouldings in such a manner as to make it difficult to discover the ancient detail. The Oxfordshire stone which he used, though beautiful in colour and texture, has been clearly shown to be incapable of resisting the London atmosphere.

As regards the wall surfaces round the clerestory windows, wherever the free-stone has been allowed to remain, they have become very seriously decayed, the decay having in some places penetrated to a depth of 7 inches or 8 inches, so that the architect is surprised that the heavy cornices and parapets should have found a sufficient support in so ruinous a wall. Just before his report, in some of the very worst places on the south side of the nave, the superstructure had been removed and the face of the wall rebuilt; but this only went a very little way, and Mr. Pearson's opinion two years ago was that "immediate and very extensive repairs and restorations were urgently needed for the whole of the masonry of these clerestories." Very much the same was his conclusion in regard to the flying buttresses supporting the clerestory walls. In some places they are dangerous, and

in others so decayed that pieces of stone are constantly falling from them upon the lead roofs below. The clerestory of the choir is also urgently in need of repair, though its condition is not quite so bad as that of the nave and transepts. Going round to the south side of the nave, over the cloister roof, the report is of the most gloomy character, declaring that it is scarcely safe to pass along this cloister roof, or, indeed, along any of the lower roofs. "Large pieces of stone are continually falling, being detached by the rusting of the iron clamps with which the masonry was thoughtlessly put together. Very considerable damage has from this cause been done to the western towers, the whole surface of which is disfigured by the bursting off of triangular and other shaped pieces of stone; these heavy pieces fall not infrequently, and do much damage." As to the transepts, that on the south side has been recently restored under the direction of the late Sir Gilbert Scott; and the porch of the north transept is also new. But above that porch the masonry is in places very loose and unsafe, and demands complete and extensive repairs. The stonework of the clerestory of Henry VII.'s Chapel, of the flying buttresses, and of the pinnacles, is also badly decayed, though in this part of the building the ruin may be arrested by timely measures. The cloisters also require some restoration, but they might be allowed to wait till the body of the Abbey has been dealt with.

It is thus evident that if Westminster Abbey is not to be allowed to fall into ruin very considerable works must be at once undertaken in order to save it. The question then arises, How are the necessary funds, which are estimated at from 60,000*l.* to 80,000*l.* to be raised, and by what means may future generations be spared the periodical scandal of discovering that this great historical church has fallen into decay? A slight retrospect of the history of the fabric of the Abbey, with a special view to this question of a fabric fund may here be not out of place, and it will at least show that we of this generation are not alone in making the discovery that a great mediæval building is a costly heritage. While the monastery of Westminster existed—i.e., from Edward the Confessor's reign to the Dissolution in 1540—there seems to have been no definite provision for the maintenance and repair of buildings belonging to the monks. Two reasons may be given for this. The Abbey was in close connection with the Crown, and the abbots were individually of great power and wealth. It was seldom difficult for the monks to obtain what sums were necessary from the king for the support of a building where kings were crowned and buried, and many parts of which had been built by the benefactions of kings. Under Henry II. Abbot Laurence obtained a grant from the King and the Empress Maud for the purpose of repairing the Abbey buildings and reroofing them with lead, and the same abbot, and many of his successors, obtained from time to time leave to impropriate livings for the same purpose—the very converse, it may be remarked, of the proceedings of the present day, when so many of the cathedrals have been mulcted for the benefit of the smaller livings. The contributions made by Henry III. to the rebuilding of the Abbey and the building of the Chapter House are matter of history, and Henry III.'s benefactions were continued by many of his successors. The abbots, again, were generous. The fourteenth century has left numerous records of individual abbots contributing to the work of building and rebuilding, the most munificent of all being Archbishop Langham, abbot from 1349 to 1361, who, both in his lifetime and by his will, gave so much money to the Abbey that by that means, and with aid from Richard II., the building of the nave was pushed forward, the abbot's house and the Jerusalem Chamber were added, and the cloisters completed. But by the time of Edward IV. we find that the Abbey had fallen into an unsatisfactory condition, and that especial efforts were necessary in order to extricate it. A curious letter from the King to the Pope, written in the year 1478, and dated "Ex oppidulo nostro Grenewici," is printed in the history of the Abbey, which was written in the last century by Richard Widmore, appealing in a piteous manner to His Holiness to excuse the newly-elected abbots from the costly journey to Rome for confirmation, on the ground of the poverty of the monastery. The King writes:—

"We pray you that the Apostolic See should condescend to succour the Monastery, which is now not only tottering but almost fallen, and which is on the point of utter ruin. A part of that Monastery, indeed, our ancestors built, and that portion is even now almost wasted by age; but the greater part they left unfinished, and of this up to the present time the poverty of the Monastery has prevented the completion, partly through the expense of the confirmation of the newly-elected abbots, and partly through the badness of the seasons and the floods, which have ruined the greater part of the estates of the Monastery."

A pathetic appeal, truly, and one which ought to find an echo in the hearts of every cathedral chapter and of every country clergyman of our own day, when agricultural distress has once more become a bitter reality.

Neither in Henry VII.'s time, when the royal munificence was expended upon the famous chapel, nor up to the Dissolution, nor during the short ten years from 1540 to 1550, when Westminster was a bishopric, nor on the reconstitution of the Abbey as a Col-



legiate Church in 1560, were any separate estates or funds set apart for the support of the fabric. Dean Williams (1620-1640), who was also Bishop of Lincoln, and afterwards Archbishop of York, spent no less than 4,500*l.* on the church alone, repairing at his own cost the north-west exterior and the chapels on the south-east. Scandal, indeed, said that much of his generosity was at the expense of the prebendaries, but this was expressly contradicted in a Chapter Act of 1638, which indignantly denied that "our dean had done such repairs out of the diet and bellies of the prebendaries and revenue of the said church, and not out of his own." It was clear then, that, under Charles I. there was no fabric fund in existence, and that the general tradition still survived which made the abbot or his successor mainly responsible for the maintenance of the building. It was only in 1662, after the Restoration, that Dean Dolben, afterwards Archbishop of York, prevailed on the Chapter to "assign henceforth one prebend's share"—i.e., one-fifteenth of the total annual divisible income—to the maintenance of the fabric, a measure which was thought worthy of honourable mention in the Archbishop's epitaph. Until the handing over of the estates to the Commissioners the measure introduced by Dean Dolben was adhered to, but it is only too plain that the sum so assigned was totally inadequate. In 1697 a petition from the Dean and Chapter to the House of Commons stated that since the Restoration they had spent nearly 20,000*l.* on the church, but that their surveyor reported that 40,000*l.* more was needed, and, in consequence of this, an Act of Parliament granted to a Commission, on behalf of the Abbey, one-sixth of the proceeds of a duty levied on coals imported into London, the same to be assigned "for the repair of the Collegiate Church and for no other purpose whatever." The Act was to be enforced from 1700 to 1716, and by a new Act in the ninth year of Queen Anne the grant was commuted for a sum of 4,000*l.* annually up to 1724 for the same purpose. But neither these large sums nor the ingenuity of Sir Christopher Wren sufficed to put the Abbey into complete repair. Between the years 1731 and 1741 sums of 4,000*l.* were granted in at least four or five sessions of Parliament; and in those years under the superintendence of Dean Wilcocks, the greater part of Wren's plans were carried out, including the erection of the western towers. We hear no more of appeals to Parliament until the present century, but in 1807 we find the Dean and Chapter petitioning the House of Commons, and stating that during the last twenty years they had expended nearly 29,000*l.* on the church. A committee of inquiry sat, and a grant of 2,000*l.* was immediately made, to be followed up during the years between 1809 and 1822 by grants amounting altogether to 42,000*l.* Since that time, and until the transfer of the estates to the Ecclesiastical Commission, the one-fifteenth share of the divisible income of the Chapter agreed to in Dean Dolben's time was always devoted to the fabric, with the addition of any revenue from the sales of timber and money paid for monuments, and any odd surplus funds of which the Chapter might find itself possessed. The average expenditure in the years immediately preceding the transfer of estates was something over 2,300*l.*—a sum which was largely increased after the commutation.

From Mr. Pearson's report, however, it is plain that this expenditure has been quite insufficient to keep the building in proper repair, and the question which is now under anxious discussion is by what means the very large sum immediately required can be raised. We understand that negotiations are in progress between the Dean and Chapter, the Ecclesiastical Commissioners, and the Government, out of which it is hoped that some prompt and satisfactory solution will be arrived at. What will be the exact nature of that solution is not as yet decided, and it would be premature to suggest any one course in preference to the others which are open. One method, however, we may deprecate, and with all the more confidence since we believe that it finds no favour with the Dean and Chapter. This is not a matter for a public voluntary subscription. Westminster Abbey is not the church of any group of individuals, or of any party, or of any sect, or even of the Establishment itself. It is bound up with the history of the nation. If the maintenance of the fabric is beyond the resources which the Chapter either commands at present or by some judicious arrangement can be made to command, then the responsibility for it ought to fall, not upon a few benevolent individuals, but upon the nation as a whole.

## THE MANCHESTER TOWN HALL CONTRACT.

THE case of Underhay v. Smith came before Mr. Justice Chitty in the Chancery Division on February 21. The questions in the case arose out of the contract for erecting the Manchester Town Hall, which was undertaken by a firm of contractors, Messrs. George Smith & Co. The points in no way involved the Corporation, but were in contest between the representatives of a late partner and the present firm. The case came before the Court upon the report of the official referee as a motion to vary the report. By the articles of partnership between the late Mr. Taylor and Messrs. Smith, Mr. Taylor was entitled to retire from the firm at the end of three years; March 31, 1872, when his share of the profits, capital, and interest on his capital was to be immediately

ascertained. The firm had contracted for a lump sum to build the Manchester Town Hall, and the contract was partially carried out during the existence of the partnership, but a considerable portion still remain unperformed at the termination of the partnership at the date above mentioned. The contract was what is called a losing contract, the estimates having omitted a quantity of ashlar requisite for the building, and on account of this the Corporation paid a sum of 28 per cent. on all the extra work when the contract was concluded. There were other items in the contract on which the representatives of Mr. Taylor contended there was a balance due to the estate. The official referee, before whom witnesses appeared, and who had the case in his Court for some days, made a report by which he found that 4*s.* 4*d.* was the contract price for 73,694 yards of solid and hollows, that 10,000*l.* was the valuation of plant and materials on the works at the termination of the partnership, and that 10,623*l.* was paid by the Corporation of Manchester at the end of the contract as a contribution towards the loss sustained by the contractors, or 28 per cent. on the extra work. Mr. Justice Chitty upheld the referee's report, and made a decree of the amount claimed, 6,623*l.* 8*s.* 2*d.*

## BRONZE CASTING IN BELGIUM.

(Continued from page 131.)

### 3. Retouching the Wax Bust.

THE great advantage of reproducing the bust in wax is that it enables the artist to work upon it, so that the wax bust is not only equal to the original in plaster or terra-cotta, but may become even superior to it; for the artist, on seeing his work in a material of another colour, and after a certain time, may discover certain faults which he can correct in the wax, or if he thinks it necessary he can make such alterations as he may consider advisable.

### 4. Preparing the Bust before making the Casting Mould or Cope.

The bust in wax having been looked over and corrected by the artist, is now placed in the hands of the founder, who begins by building a layer of firebricks of the size required for the object that is to be cast; this layer, for a bust, may be 1 mètre by 80 centim., and 0.25 centim. in height above the floor of the atelier. When ready the wax bust is placed upon it on its pedestal of "potin," and firmly fixed to the brick layer or base. The next operation is one of considerable delicacy, namely, the placing of the runners or channels to enable the liquid bronze to flow through and fill up the vacant space left by the melted wax, and the vents, which are other channels for the escape of the air and gas driven out of the hollow by the force of the liquid metal.

For a bust the placing of these channels is not difficult, but when a complicated work—a group or a large bas-relief—has to be prepared for casting, the proper position of these channels requires considerable study, for if one of them should be badly placed it would compromise the success of the casting.

In order to make a runner for the bust in question, a stick of wax is used, 0.60 mètre long, with a diameter of 40 millim., one end of which is cut or flattened into the shape of the mouth-piece of a whistle; the other end is considerably thickened by the addition of wax, until it has the form of a funnel; it is then bent into the form of a double syphon, with the two parallel branches considerably lengthened. Having thus prepared the runner, in order to fix it three or four thin iron pins are driven, in a straight line, at a distance from each other of 1 centim., into one shoulder of the bust, from which they are allowed to project about 2 or 3 centim.; upon these is pressed the flattened end of the runner, and the joint where it touches the shoulder is then closed with wax, which is melted with a heated tool, thus increasing the solidity of the joints. The vent, which is fastened in the same way on the other shoulder, is a simple straight stick of wax, thinner than that of the runner, also with the flattened end touching the shoulder.

If from any cause the runner and the vent are not firm in their positions, another iron pin is driven into the top of the head of the bust, and the runner and vent are fastened to it with packthread.

The founder has now before him the bust, surmounted by the runner and the vent rising from the shoulders to the summit of the head, like little chimneys, to the height of 15 or 20 centim.; he then proceeds to drive a number of iron pins all over the surface of the bust, through the wax, into the core, the object of which is to maintain the core in its place; these pins must project one-half their length from the surface of the bust.

### 5. The Formation of the Casting Mould or Cope.

The bust thus prepared is placed on the brick layer in the place in which it is to be fired; it is then surrounded by a wooden case, having the form of a four-sided truncated pyramid. This case, which must be sufficiently large to leave a space of from 15 to 20 centim. between it and the greatest projection of the bust, is made of frames placed one upon the other, 23 centim. in height,



the whole, when placed together, having the form of a pyramid ; the first frame, namely, that which rests on the brick layer, being naturally the largest. The case being ready, the cube measure of its capacity is calculated, and the upper frames are removed, leaving only the lower one resting on the brick layer.

The mould is made of precisely the same material as that forming the core of the wax bust ; the requisite quantity is prepared as well as the proper number of measures of water required for mixing the "potin."

As the operation of filling the frames must proceed rapidly, and once begun cannot be stopped, care must be taken to have a sufficient supply of the material at hand.

For the formation of the cope of a large-sized bust, three men are required for mixing the "potin," two for pouring it into the frames, and two for throwing the mixture on to the bust, which is done with painters' brushes, and in such a way as to thoroughly fill up all the cavities of the sculpture.

The three mixers have each before them a vat or bucket containing one measure of water, into which they pour rapidly the dry "potin," which is in the form of fine sand or powder, and this not all at once, but gradually, by allowing it to fall through their fingers ; when the "potin" is all in the water the men work it into a paste with their hands. As soon as it is ready the other men pour one after the other the contents of the three vats or buckets into the lower frame of the wooden case ; in the meantime the mixers are preparing fresh vats of "potin." As soon as the first frame is nearly filled, the second frame is placed above it, the joints being closed with "potin" that has become almost hard, and it is filled in the same way ; at the same time the other two men, armed with brushes, have been sprinkling the bust with the mixture so as to fill up completely all the cavities of the wax bust ; if this is not done with great care and exactitude, any cavity that is not filled with "potin" will retain a certain quantity of air, and when cast the cavity will be entirely filled up with a solid mass of bronze, which would require to be removed by the chaser at a considerable expense, or it may happen that the fault is one impossible to remedy. When all the frames have been placed one upon the other and filled with "potin," the operation is completed, care having been taken to fill the upper frame only to the level of the top of the runner and the vent, so as not to cover them.

A third channel, required for draining off the melted wax, is formed in the same way as the other two, a stick of wax of 30 millim. in diameter being placed at the base of the bust on the slant, so as to facilitate the issue of the liquid wax, the stick of wax being fastened by one end to the wax of the bust, while the other end touches the wood which forms the case. The "potin" having been allowed to harden, which it does very rapidly, the wooden frames are removed, and the cope appears in the form of a block of stone, on the upper surface of which is seen, on the right, the wax of the runner, and, on the left, that of the vent, and at the base that of the drain.

#### 6. Firing.

The block is now ready for firing. A furnace of fire-bricks is built round it, two chimneys being placed on the runner, and the vent communicating with the outer air, and round this furnace a second is built, in which a coke fire is lighted. The fire should be moderate at first, gradually increasing until the mass is baked throughout, so that it is completely red hot to the very centre.

After baking for six hours the block is sufficiently heated to cause the wax to melt, which then escapes through the drain, which is in connection with an iron tube passing through the two furnaces, and communicating with a vat into which the wax flows. When the wax has ceased to flow, the opening from the drain must be carefully closed, in order to prevent any air from reaching the interior, which would be injurious to the process.

After thirty-six hours' firing puffs of blue smoke are seen issuing from the chimneys. This shows that the heat is sufficiently intense to cause the evaporation of any wax that may have remained in the block. After sixty or seventy hours the smoke changes from blue to a reddish hue ; this shows that the wax is completely destroyed. The smoke is succeeded by a slight watery vapour, and the fire is increased until all moisture has disappeared. This is ascertained by placing a cold steel plate over the orifice, upon which the slightest vapour shows itself in the form of a veil or dewlike drops. If at this moment it were possible to look into the centre of the block, it would be found to be of deep red. When all symptoms of moisture have disappeared, the fire is covered up, no further fuel is added, and the fire goes out gradually.

The external furnace is pulled down as soon as the bricks have cooled sufficiently to enable the workmen to do so without burning themselves, and in order to hasten the cooling of the block some of the bricks forming the cover of the interior furnace are also removed. Later this is also demolished, and the moulding-block is allowed to cool. In a word, it is necessary to proceed gradually for the process of cooling as well as for that of firing, sudden changes of temperature being fatal, and the success of the operation depending in great part on the regularity of the process.

The firing being now finished, the block has the same appearance as before, only in removing the chimneys the runner and the

vent are found to be replaced by holes or channels, while another hole will be found at the base in the place of the wax drain. The wax in melting has formed these channels, and has left a hollow space throughout the block between the core and the mould.

Reference has been made above to the use of iron pins pressed into the wax bust.

As long as the core, the wax, and the mould had not been submitted to the action of the fire they formed a solid mass, but with the melting of the wax the core has become isolated, and, as it is formed of exceedingly friable earth, the least motion might throw it down and break it ; this inconvenience is avoided by the employment of the pins above referred to, which, penetrating through the wax, on the one hand into the core, and on the other into the mould, renders the core immovable even after the disappearance of the wax.

#### 7. The Casting in Bronze.

This is the last operation. The block having become sufficiently cool, it is surrounded with iron frames placed one above the other ; the space between the block and the frames is filled by pressing into it ordinary moulding earth. This operation requires the greatest care ; its object is to prevent the block from bursting when the liquid bronze is poured into it, by the pressure of the gas and the expansion of the air while the fused metal is flowing through the mould, a comparatively small quantity of metal in fusion being capable of producing effects of incredible force which it is difficult to account for.

The block being perfectly iron-bound, a basin of iron covered with baked clay, and pierced with a conical funnel, is placed over the runner, and closed with an iron stopper, from which projects a long stem. The hole of the basin communicates directly with that of the runner ; the opening of the vent is left free, but in front of it a small basin is hollowed out of the block. Everything is now ready for the casting.

If the bust is calculated to weigh 50 kilog., 80 kilog. of bronze are put into the melting-pot in order to be certain of having enough metal, and it is necessary to allow for the runner, the vent, and the drain. The bronze, which has hitherto given the best results, is composed as follows :—70 kilog. red copper, 28 kilog. zinc, 2 kilog. tin.

The bronze being sufficiently melted, the crucibles are lifted out of the furnace, and are emptied into the basin above referred to ; a workman at the word of command takes out the iron stopper, the molten bronze flows into the runner, penetrates into the mould, fills up all the hollows, and returns to its level, the surplus metal flowing out at the vent into the basin that has been hollowed out of the block to receive it, preceded by the air and gas driven out by the entry of the metal.

If the operation has been made without producing noise, the casting may be considered to have been successful, but notwithstanding all the care taken to attain success, some fault may have occurred.

The natural curiosity to learn the result may soon be satisfied, for in a quarter of an hour the metal will have cooled sufficiently to allow the block to be broken up.

The workmen begin by lifting off the iron frames, and then removing the earth that was pressed round it, commence to break up the block with iron picks, proceeding with precaution, and as soon as any portion of the bronze shows itself the picks are laid aside for smaller and lighter tools, with which the "potin" that surrounds and conceals the work is at length removed, the bust gradually appears, and it is possible to judge whether the casting has been successful ; the bust itself, however, is covered with a white crust from the "potin" still adhering to it, and which only partially detaches itself. To get rid of this crust entirely is a work of some time.

The runner, the vent, and the drain, which have been transformed by the casting into solid bronze, are now sawn off, the core inside the bust is broken up, and the bust is emptied ; it is then placed for several hours in a bath of water and sulphuric acid, and when taken out is vigorously scrubbed with hard brushes, rinsed in clean water, and allowed to dry. The bust is now handed over to the chasers, who efface the traces left by the runners and vents, remove any portions of metal that may fill up the cavities into which the "potin" has not penetrated, stop up with bronze the little holes left by the iron pins, and in fact place the work in a perfect state, leaving, however, untouched the epidermis of the bronze, for in this consists the merit and value of the "cire perdue" process, which renders so completely every touch of the artist that it seems as if he had kneaded and worked the bronze with his fingers.

The bust, now completed, is placed in the hands of the bronze decorators, who give it a "patina" in imitation of that produced by oxidation. The colour generally preferred for portrait busts is the brown tone of the Florentine bronzes. This artificial "patina" can be produced in a great variety of tones, light or dark, but in every case it is preferable that a well-modelled work should have a dead unpolished surface.

The decoration of a bronze work is a question of taste or fashion for which there is no rule, though no doubt for many the success of a work depends very often on its decoration.



## NOTES AND COMMENTS.

THE Tableaux Vivants, which are to be witnessed on March 12 and 13 in the Prince's Hall, Piccadilly, should be attractive, as the grouping will be superintended by Mr. MILLAIS, Mr. POYNTER, Mr. LONG, and Mr. G. SIMONDS, while Mr. JOHN O'CONNOR undertakes the general arrangements. The subjects selected are from Baron TENNYSON'S "Dream of Fair Women" and "Lord of Burleigh." The first tableau will have HELEN of Troy and IPHIGENIA for subjects or heroines, and will consist of four scenes, viz., first, *Helen*; secondly, *The Flight with Paris*; thirdly, *Helen and Iphigenia*; fourthly, *The Sacrifice of Iphigenia*. Mr. POYNTER will be the director. Next will come Mr. LONG'S four tableaux, which will show the unhappy fate of the daughter of JEPHTHAH, and by contrast that of CLEOPATRA. Mr. GEORGE SIMONDS, the sculptor, will direct the two tableaux of *Fair Rosamond*, and the two of *Eleanor the Queen of EDWARD I.* Mr. J. D. LINTON will have congenial subjects in *Margaret Roper* and *Joan of Arc*. Last will come the tableau from the "Lord of Burleigh," which is under the charge of Mr. MILLAIS. The object of the representations is to raise funds for the Soho Club and Home for Working Girls.

THE fancy dress ball which was given on Monday night in the studios of Messrs. BRITTEN and CARTLEDGE, in Bloomfield Place, was successful, and a great many young artists accepted invitations. The dresses were generally picturesque, one of the best being an Indian chief. The three adjoining studios were utilised for dancing, refreshments, and retiring, and the ball was enjoyable from beginning to the end. Just now fancy dress balls find favour among artists, and the ball at the Institute of Painters in next May is anticipated with much pleasure.

THE District Surveyors' Association, like more important institutions, has been compelled to listen to the cry for reform. It was maintained by one party that there were too few members on the committee, and that the few were apt to take their ease instead of looking after the affairs of the association. The reformers have won the day, and the result of the victory is a larger committee, a president, and a vice-president. The officers elected are as follows:—President, Mr. WOODTHORPE; vice-president, Mr. PARSONS; treasurer, Mr. FOWLER; honorary secretary, Mr. TABBERER; committee, Messrs. BOVILL, CARRITT, CLARKSON, COLLIES, FLETCHER, HANSOM, HAYWARD, KNIGHTLEY, LANSDOWN, MARKHAM, MATHEWS, OLIVER, SMITH, WALKER, WALLEN, WATSON, WOODWARD, and WILLIAMS.

BIRMINGHAM, like most other towns, contains many houses which are unfitted for habitations. In one ward fifty houses have been closed by the owners rather than undergo the expense of repairs. In Key Hill a landlord suggested that rags and paper should be used to stop the holes in his houses. Houses in Devonshire Street are built of mortar which consists of one part lime to fifty parts of sand, the so-called sand being road sweepings; the mortar when touched fell out of the walls. There are houses in the town in which, according to the School Board officers, "one had to grope one's way about on dark staircases at the risk of breaking one's neck." It is alleged that in many cases the tenants could live in better dwellings if they were more temperate, and the squalor that is inevitable in the cheapest class of houses should be a sufficient incentive to exertion and self-denial. It is to be hoped that the new Royal Commission will endeavour to discriminate between the misery of the unfortunate and that of the improvident.

THE Industrial Dwellings Company continues to prosper within the limits prescribed, and at the end of the present month the entire capital of the company, amounting to 500,000*l.*, will be invested. In addition, a sum of 394,000*l.* has been borrowed from the Public Works Loan Commissioners. The dwellings erected by the company need never be vacant. For eighty-three new dwellings in one building there have been 382 applications, and for eighty dwellings in another 323 applications. The company are not satisfied with the Metropolitan Board of Works. A site in Mint Street, Borough, was purchased, because it was understood that it would be

sold with a frontage to the new street, as was stated in the notices and in the conveyances. But the street referred to has not been constructed, and the site is in consequence difficult of access. It was also stipulated that the company's buildings should be erected within twelve months of the purchase of the ground, but fifteen months were lost before the Metropolitan Board of Works would approve of the plans. The company have been in consequence compelled to suspend the works in Mint Street.

THE statement that the Blenheim collection of pictures had been purchased by the German Government is supposed to be premature; but experience shows that in such cases the sale will sooner or later take place. It would be a great acquisition for Germany to obtain possession of the pictures, and all that diplomacy can do will be undertaken. The Court of Chancery is possessed of some authority in the case, and can give or withhold approval of the sale; but it is not difficult to evade the necessary application, and a respect for the law does not embarrass the present owner of Blenheim. The Government and the trustees of the National Gallery have, according to Mr. GLADSTONE, heard "rumours," but it is not considered prudent for the officials to take the initiative, that is, to make an offer. If the pictures are valuable no rules of etiquette should prevent us from securing them at a fair price.

SIR FREDERICK BRAMWELL would seem to have been intended for a popular lecturer, and his skill in making difficult subjects plain has often served him as a witness in the Courts and in Parliamentary committee rooms. He lately discoursed on Thames communications, and almost excited enthusiasm among his auditors at the Royal Institution. According to Sir FREDERICK, London looks insignificant if its engineering works for communication between both sides of the Thames are compared with what has been done in New York, in Liverpool, and other cities. There are three ways of affording access between the Middlesex and Surrey shores—namely, a high-level bridge, a tunnel, and ferries. The cost of the bridge would be about 745,000*l.*, and the annual expenditure 18,000*l.* But preference was given by Sir FREDERICK BRAMWELL to a combination of tunnel and ferries, like that proposed in the scheme of the Metropolitan Board of Works, which consists of a tunnel between the Hermitage Basin and the London Docks on the north side, and Mill Stairs and St. Saviour's Dock on the south, with ferries from the Isle of Dogs to Greenwich, and from North Woolwich to Woolwich.

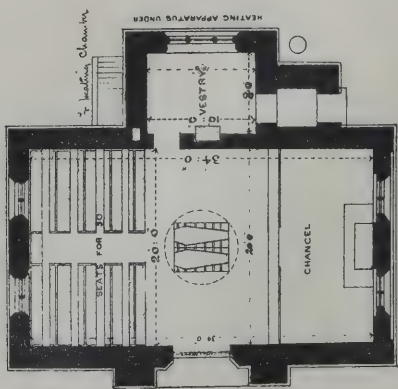
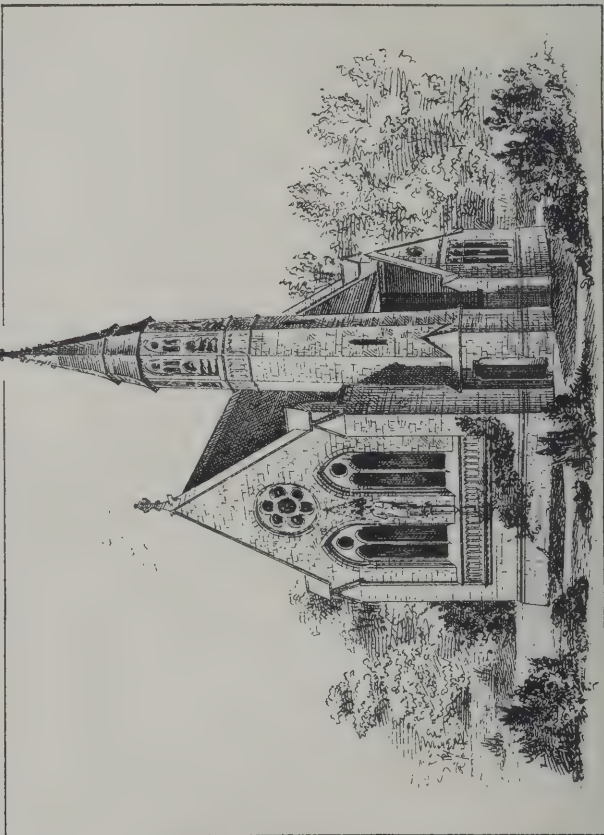
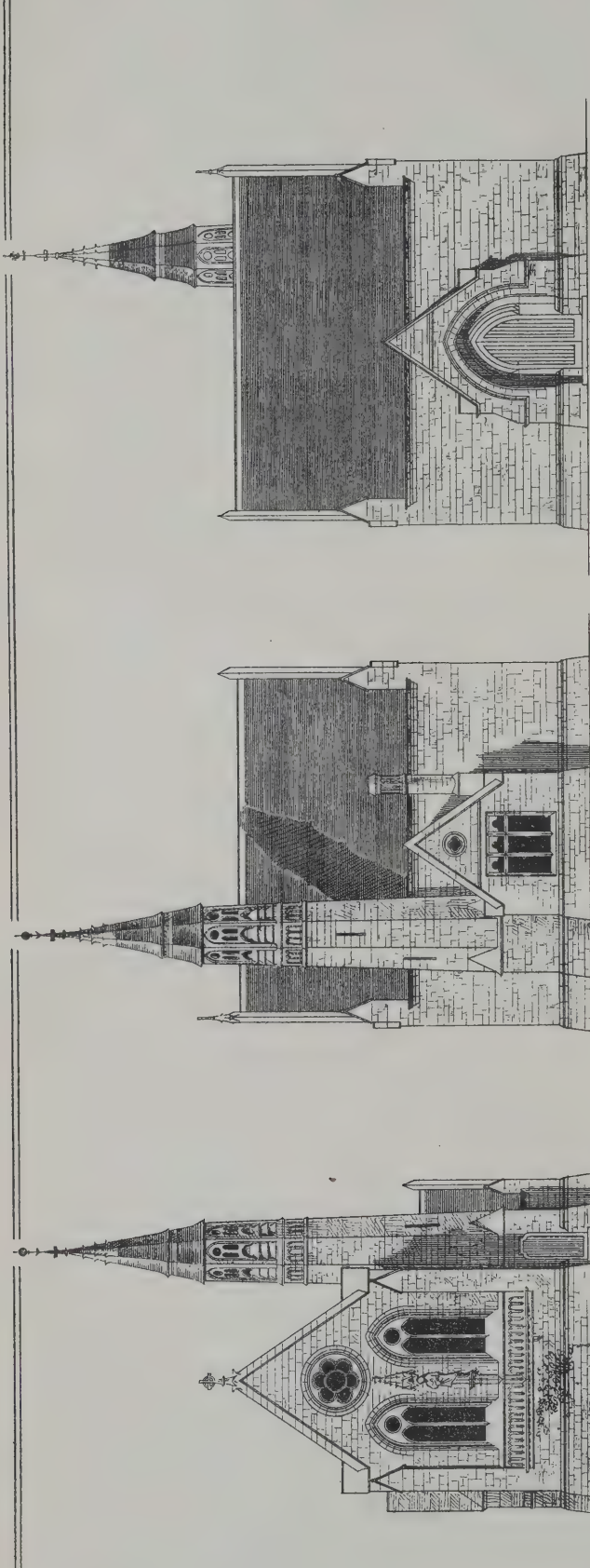
THE allegations that Scotch pig-iron contains an undue amount of cinder iron has excited anger among Northern ironmasters. But it is admitted by the trade association that the determination of the quality of the iron is undertaken in a way that is only empirical. According to the official defence, "it has never been the custom of merchants and brokers to concern themselves regarding the process of manufacture, but only with the quality of the pig-iron produced." Analysis is scorned by the members of the association. "The manner of determining the quality and of assorting the iron into its various numbers has been to break the pig, and to judge it by the appearance of the fracture." A rough and ready test of this kind is suited to primitive times, and is without any certainty. When it is known that a man like the late ROBERT STEPHENSON declared that the quality of iron could not be judged from fracture alone, and when it is found that the majority of engineers agree with him, it is absurd to say that anyone who doubts the uniformity of Scotch pig-iron is "an interested party." Better tests than the eyes of the members of the trade association now exist, and will have to be utilised if Northern iron is to preserve its reputation.

ANOTHER series of twelve panels, forming part of the internal decoration of the Panthéon, will be uncovered within a few days. These paintings, which represent various scenes in the life of Ste. GENEVIÈVE, the patron saint of Paris, cover the whole of the right-hand wall of the Sainte-Geneviève Chapel. The remaining panels facing them are also well advanced, and, should nothing unforeseen occur to delay the work, the whole of the mural painting in this chapel will be ready by August 15.

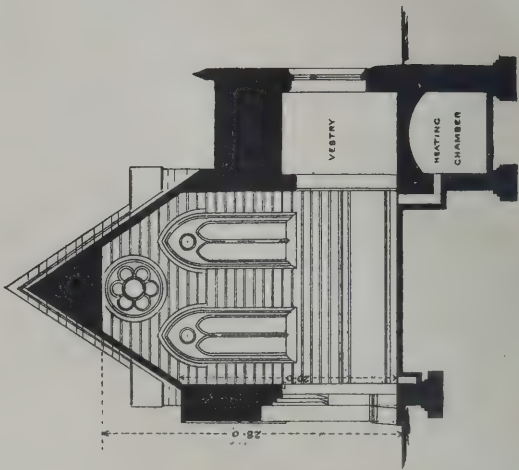








PLAN



SECTION

DESIGN FOR CEMETERY CHAPEL.  
BY A. HESSELL TILTMAN, A.R.I.B.A.









PHOTO-LITHO, SPRAGUE & CO. LONDON.

PROPOSED MEMORIAL CHURCH

R. W. EDIS.





















NEW PREMISES, CORPORATION STREET, BIRMINGHAM.

MESSRS A. B. PHIPSON & SON, ARCHITECTS.



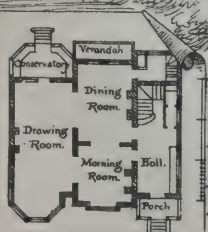






GARDENERS COTTAGE, BECKENHAM, KENT.

H. D. APPLETON, A.R.I.B.A. ARCHITECT.



HOUSE AT SYDENHAM.

FOR FERNAND DUBOC ESQ.  
H. STAPLEY, ARCHT

Sprague & Co 22, Mark Lane London St. EC







## ILLUSTRATIONS.

PROPOSED NEW MEMORIAL CHURCH, RUFFORD.

THIS illustration is a reproduction of a design by Mr. R. W. EDIS, F.S.A., which was exhibited at the last exhibition of the Royal Academy.

THE MIDLAND EDUCATIONAL COMPANY'S PREMISES, BIRMINGHAM.

ONE of our illustrations this week consists of the elevation to Corporation Street of the new premises now in course of erection for this enterprising firm. The building when completed will be six storeys in height above the street level, exclusive of large well-lighted show-rooms for school furniture and other heavy goods in the basement. The ground-floor is devoted to retail purposes in Corporation Street, and to wholesale purposes in Cannon Street. The warehousing fronting the latter street is also carried to a height of six storeys, communication between which will be by one of Messrs. WAYGOOD'S hydraulic lifts, the upper portion of the Corporation Street frontage being devoted to directors' rooms, dining-rooms, &c., for the numerous staff of assistants engaged on the premises. When completed they will form an important addition to the commercial establishments of Birmingham. The architects are Messrs. A. B. PHIPSON & SON, of Colmore Row, Birmingham, and the contractors are Messrs. BRADNEY & COMPANY, of Wolverhampton.

The Midland Educational Company was founded in 1870, and in the Birmingham and Leicester offices an extensive business is transacted in England and abroad. Books and stationery of all descriptions are sold, and printing, bookbinding, engraving, &c., are undertaken. The well-known "Reliance Desk" for schools is made solely by the Company, and was the one adopted for the Prince of WALES'S School at Sandringham.

GARDENER'S COTTAGE, BECKENHAM.

THE cottage shown in illustration contains, in addition to living-rooms for gardener, a two-stall cow-shed, hay-loft, pigeon-house, and cistern-room. It is built of local red bricks and Broseley tiles. The contract was 316*l.*, and the work was carried out by Messrs. HOWARD & DORRELL, of 29 Russell Street, Covent Garden, from the design of Mr. HERBERT D. APPLETON, A.R.I.B.A., of 157 Wool Exchange, Coleman Street.

DESIGN FOR HOUSE AT SYDENHAM.

DESIGN FOR CEMETERY CHAPEL, MORLEY.

THE accompanying design is one of two submitted in competition for cemetery chapels at Morley, by Mr. A. HESSELL TILTMAN, F.R.I.B.A., of 7 John Street, Bedford Row, London. The materials proposed to be used were local bluestones, with Ketton stone dressings. The roof to be of slates. The cost was estimated at 1,200*l.*

## COLOURED GLASS.\*

COLOURED glass windows may be divided into two grand divisions, the eastern and the western—the eastern formed by the insertion of thin unshaded coloured glass into or on to patterns cut in stone, marble, plaster, or wood; and the western, where the glass is fitted into leaden frames and shaded, although I believe the clear glass roundels of the lower windows in Eastern houses are set in lead, both methods having been used in Rome.

In Oriental work, the wide chamfered bars of plaster forming the pattern not only act as a dark separation, confining the radiation to their own chamfers, but when seen at a proper angle the effect of shading is produced. One bright jewelled spot of the pure glass is seen, and the remainder of the colour is but the reflection on the chamfer. The ground is formed in this wise:—The plaster is thinned and pierced with round holes, which are glazed with one colour, though often modified in tone and tint. From the small size of the holes, the radiation would be more confined; yet the light reduces this large area of blank space to a fine network. Although I have never seen it done, I should think this mode of glazing might even be adapted to figures. Of course, in Mussulman countries figures are inadmissible. I believe no complete coloured glass window in the West is older than the

twelfth century, though some of the tenth and eleventh centuries are spoken of.

It seems a contradiction to speak of grisaille windows under coloured glass, but in old glass the grisaille was not white, but of varied light tones, such as sea-green, pale blue, fawn, pink, pale brown, and such pale tints, and the glass was more like onyx, agate, or alabaster than like clear glass. The Cistercians eschewed colour, but tried to make amends for its absence by the choice of rich patterns in the lead-work. In many cases the early grisailles are almost equal in beauty to the finest coloured glass.

I once had a glimpse of the grisaille windows in the cathedral at Poitiers towards dusk, and the impression of the soft and varied loveliness of their pearly hues impressed me only a degree or two less than did the windows of Florence or Chartres.

When grisaille is made of pure white glass, even if it be ground or rough and full of bubbles, nothing more vapid can be imagined, and the introduction of one such window amongst coloured ones utterly spoils their effect in a building.

Even when the glass was of the thickest and best quality, and was greatly varied in tint and tone, it was found advisable to insert coloured bands and jewels, so as to lead the eye to the coloured windows, and to prevent a sudden break of continuity; but there was a general inclination to mingle coloured subjects with jewelled grisaille, or to alternate it with them.

We hear from Theophilus that he had seen, admired, and tried to imitate the coloured glass windows of Sta. Sophia, and we may well believe, from what we know of the mosaics at St. Vitale, St. Apollinaris, and the tomb of Galla Placidia, that the stained-glass windows were not less lovely in colour, and that the laws of harmony were as fully understood.

To whatever cause we may attribute it, the fact remains that the glass of the twelfth and early part of the thirteenth centuries is the most splendid that yet remains to us; the gorgeous colour indulged in by the Romans at Byzantium had no doubt its effect, for that was the centre from which all the arts had flowed. The Roman emperors found the Mosaic for the mosque at Damascus as well as for the Kaabah at Cordova, they found the architect for St. Mark's, and we hardly know when Byzantine influence was absolutely at an end before the final extinction of the Roman empire in 1453, by Mahomet II.

The splendour, too, of the Court of the Catephs must have had its influence on mankind, and doubtless the magnificent stuffs and tapestries made for it found their way into Europe, even if it were only in the shape of presents. The account of the presentation of the ambassador of Constantine IX. to the Caliph-el-Muktedir, A.D. 917, gives us some notion of the wealth and display then existing at Bagdad; and about this time Arab art and learning began to affect the West, though the forms in these twelfth and thirteenth-century windows are still mainly Byzantine.

The glaziers' art was then, too, at its zenith, and it is also possible that at this time the colour sense was exceptionally developed.

We know that Theophilus was a monk, and he apparently wrote his treatise for another monk. If he lived in the twelfth century, his being a monk may account for some of the excellence of the work; but whether the windows were done by monks or laymen, the same qualities would, and will, produce similar effects when the natural gifts exist and grand opportunities for their exercise—I mean a strong desire for the perfection of the art (for the art's sake alone, apart from all selfish considerations), combined with acute observation, untiring industry, and patience.

The twelfth and thirteenth-century windows were of the deepest and richest colours, the ground generally being of crimson and azure, and only rarely of emerald; the figures and objects in the pictures were paler in tone than the grounds, often strikingly original in their harmonies, and between the pictures there was a fully-coloured diaper; and white was used as a jewel so precious, indeed, that the narrow strips were often painted to form strings of pearls.

In the aisles of churches patterned windows were generally adopted, and in the clerestories gigantic figures. If you stand in the round part of the Temple Church you will observe the beauty of the east windows, and particularly the marvellous effect of the main forms of the patterns; but it is in the nave of Chartres that we find patterned windows that exceed in magical beauty any other manifestation of colour that man's hand has achieved. Some notion of their beauty may be got from those at Canterbury. I was unfortunately unable to get some tracings of these done in time.

When we look at Titian's *Entombment*, Bonifacio's *Finding of Moses*, or some of the sketches of Schiavone or Paul Veronese, we think it impossible to find greater beauty of colour; but these masterpieces, as far as their colour goes, leave us comparatively emotionless when put in the scale with these windows of Chartres. We say what geniuses these men were; but when we look at the windows it seems as if some divinity had melted every lovely jewel and every tone of mother-o'-pearl, and poured out a cascade of coloured glory that flames, sparkles, and throbs, that raises us to ecstasies, and makes us thankful that the tempter of mankind is not there to offer us the power of making such for his usual fee, and we ask ourselves if they were really made by men, and not

\* From a lecture by Mr. G. Aitchison, A.R.A., delivered at the Royal Academy on Monday, the 25th ult.



sent down to us direct from heaven, to give us a taste of its delights. We have the apotheosis of colour, and though, on close inspection, we may find the composition ludicrous, and the drawing childish, though the saints have purple or green hair, we are no more disturbed by that than a musical devotee when he hears the most exquisite song sung by a woman with the loveliest and most cultivated voice because she is singing nonsense in an unknown tongue.

After this apogee of the glazier's art two or three causes combined to drag it down; it is undoubtedly the case that this full and rich toned glass did produce, not merely "a dim religious light," but almost gloom, and this rich-coloured glass was probably very dear, the want of funds and of cheerfulness probably combining to urge the introduction of white glass.

So long as this so-called white glass was mainly as low in tone as the coloured, only one object was attained, but it was attained without a sacrifice of harmony; directly the white glass admitted the light freely, the whole window was out of tone, and you were blinded with the patches of light. The third cause was the insane attempt of the glaziers to vie with the painters when they could already produce more divine things. They lost the reality to seize the shadow. Accuracy of form, roundness, and shadow perspective, and aerial tints, so proper and excellent in a picture, where the light is reflected, were absurd in a transparent material, where the light came through the figures, and where the sun blurred or destroyed every outline. But, for all that, the glaziers came down from their glory in the heavens to strive on earth with the painters, and to be ignominiously beaten; and, until the end of the fifteenth century, we gradually pass from poetry to prose. A round or a cusped line in the old glass was a sort of note that a niche was meant; but afterwards the architecture was nicely drawn—at first gilt and coloured, but gradually it became white, with the curving only in pale gold, and filled more than half the window. The figures, too, became better drawn, but their white mantles filled the larger part of the space left; the under-dress, the background of the niches, and the little left of sky beyond the architecture, were alone deeply coloured. Even the flesh became at last white. There were, of course, clever fellows amongst the glaziers; and the velvety quality of the white, like the texture of a cumulus cloud, is fascinating, but the capacity of raising emotion was gone.

In the twelfth and thirteenth centuries the sun adds additional glory to the windows; in the fifteenth and sixteenth it rather spoils them, though you must understand that this does not apply to the fifteenth-century windows of Florence Cathedral.

As to the application of glass it is needless to say we do not want a brilliant light in cathedrals, in churches, in the halls of courts of justice, so pathetically called by the French the halls of wasted footsteps; in the halls and staircases of great public buildings, palaces, and private mansions; and the size of the windows in such places may be enlarged to make up for loss of light. In these stained glass of the most splendid quality may be put, glass of the quality of the finest of the twelfth century or of that of Florence; but, of course, as far as the figure drawing and composition go, we want to have the best that can be got, and I may here remark that when this jewelled brilliancy and depth of colour is got, all decorative wall-painting must be kept simple and unobtrusive, and not try to vie with the gorgeous colours of the glass, but leave spaces comparatively plain for the eye to rest on. I never saw the windows of the Ste. Chapelle in Paris lighted by the early morning sun, but in ordinary daylight the effect of the rich painting and gilding lighted up by the still richer windows is oppressive, and we long for plain stonework or white windows.

But this quality of coloured glass is not suitable for living-rooms; in these we want but little deep or positive colour. If the outlook is pleasant or necessary, the colouring must be confined to window borders, and the colours must be sober, such that will not dazzle, fatigue, or annoy us. Slight colour may be successfully used where a blank wall or an unpleasant prospect is to be shut out. In picture galleries and other places where pure white light alone is wanted, we must banish colour if we cannot so blend it as to make pure white light; still there is ample opportunity for much to be used, if it be but to give a little interest and warmth where half the year the prospect is most dreary, chilling, and forlorn. Nothing is prettier than to turn a skylight into a pergola, with vines and grapes, or to cover it with leaves of the Virginia creeper, or even with some pleasant pattern. A little colour with much human skill is mostly a pleasant object.

It is mainly owing to the Gothic revival that stained glass has been awakened from its long sleep, and has spread itself to such an amazing extent. Not only are our churches and cathedrals being filled with it, but it is a rare occurrence to find a new building or house of any pretension without some specimen of stained, painted, or enamelled glass.

Where the avowed object of the promoters of stained glass was imitation we cannot blame those who executed it for producing imitations. The stereotyped phrase of one at least of the great deceased architects was:—"What would a thirteenth-century architect say of this?" and, if it was not the phrase, it was the thought of many other deceased architects, who, if less able, were more influential. Though we are now beginning to deplore these

forgeries, whether in stone or stained glass, we must bear with what has been done, at any rate when it is not too abominably bad, and only hope that in the future the glass, as well as the stone, may bear the stamp of the century in which they are fashioned, that the figures should at least be well drawn, and the writing be that of our own day. The present European costume is so ignoble that I fear it is beyond the power of art to fit it for a picture. To the best of my belief I have never seen a modern imitation of a twelfth or thirteenth-century window that could be mistaken for a first-rate old one. The best imitations I know are those of the Ste. Chapelle, and, possibly, they might be taken for bad windows of the time, though the whole tone is too uniform. I do not say this out of any love for antiquity. I would, on the contrary, much rather think that the modern windows are the best. "The past is nothing, and at last the future can be but the past," but we must not shut our eyes to facts, and we must so use the works of the past as to enable us to excel them.

### THE SCOTTISH CONSERVATIVE CLUB, EDINBURGH.

THE new club, which has been erected on the site of the old Conservative Club House, in Princes' Street, Edinburgh, has been opened. The style adopted is Early Italian Renaissance, and the effect is most pleasing. The Princes' Street elevation is 76 feet high from the pavement to the cornice, and 95 feet to the ridge of the roof, and is divided into seven floors, two of which are in the roof. The stone-work of the street floor is rusticated, and all above is plain ashlar, finished with a carved frieze and cornice, from which, without the intervention of the usual blocking course, rises a steep red-tiled roof. At the level of the first floor there is a balcony extending along the whole front. The oriel window, which projects very little, is carried up as high as the smoking-room or second floor, where there is a small balcony extending across the two eastmost windows. All the windows have architraves—those on the dining-room floor being pedimented, alternately circular and triangular; while the smoking-room windows have cornices, and the upper or bed-room windows architraves only, used as an enclosing line on all sides of the building. The entrance to the house is by a spacious arched door and vestibule to the hall and staircase, which form important features in the internal disposition of the building. The walls are panelled with oak five feet in height, and the floors laid with marble mosaic, with ornamented panels and border. The hall is warmed by an open fireplace in oak and marble, with marble fender, tile hearth and sides, and dog grates, while a clock, encased in a circular oak frame, rests over the mantelpiece. Ascending three steps is the grand staircase. It is treated in the Italian manner, is of Arbroath stone, 8 feet six inches wide, and has a carved oak balustrade and hand-rail. Two sides of the staircase are arcaded, and the stair is worked through these; and along the other two sides to the dining-room landing, and from various points, the perspective effects produced by the combination of the stair and arcades are successful. The stair is lighted by a large three-light window, filled with stained glass, and forms a memorial of the late Lord Beaconsfield. The centre light is fitted with an emblematical figure of Britannia, with the motto "Imperium et Libertas"; and in the side lights there are figures symbolical of politics and literature—the arms of the late earl, his favourite flower (the primrose), and other devices being also introduced. In harmony with the building the treatment of the windows is Italian, the glass-work being entrusted to Mr. Ballantyne, Edinburgh. On the left of the staircase the morning or reading-room is situated. It is a large L-shaped apartment—the shorter arm being separated from the longer by an arcade of two arches. In finishing this room walnut has been used, and the constructional beams carrying the floor above form the design of the ceiling, and are cased in that wood. There are three fireplaces in the room, two of which form an important feature in the design of the room, and over one of them a panel is provided for a portrait. From the first landing of the stair a broad corridor with vaulted ceiling, extending backwards to Rose Street, gives access to the library, parlours, members' and strangers' billiard-rooms, and lavatories. The library, which is lighted from the roof, is finished with Sequoia wood, which has somewhat the appearance of cedar. The four sides of the room are fitted with bookcases, one of them having a fireplace treated architecturally, and having a place for a portrait. The billiard-rooms, which are finished with darkened oak, contain three tables, two in the members' room and one in the strangers' room. Both rooms are fitted up with settees on a raised platform. Ascending the grand stair, which does not extend beyond the first floor, one reaches the dining-room, a large and lofty apartment occupying the entire front of the building. Oak has been adopted in the finishing of the dining-room, the walls are panelled to the height of 9 feet 6 inches, and a large fireplace is worked in at each end of the room, having panels for pictures. The ceiling of the room adds much to its architectural effect. It is divided into compartments by large beams with carved corbels transversely, and longitudinally into five panels in the breadth by smaller beams,



the intermediate spaces being plastered and capable of decoration. A private dining-room, secretary's and house-steward's rooms, and a set of lavatories are situated along a corridor on the same floor. From this corridor access is obtained to the service-stair, which begins at the basement with an entrance from Rose Street Lane at the ground-floor level, and is continued to the top of the house—nine floors in all. All the service-rooms are reached from this stair, which keeps these apartments entirely distinct from the public parts of the house. At the end of the corridor there is a stair which leads to the members' bedrooms. Returning to the grand stair, a smaller stair branches off to the left and leads to the second floor. To the front is the members' smoking-room, which occupies the entire front of the building to Princes' Street, while immediately behind this is a large smoking-room for strangers, and a card-room, waiters' rooms, lavatories, &c. The remainder of this floor to the rear of the front block is entirely given up to members' bedrooms. The ascent to the next floor, which is entirely occupied by members' bedrooms, is by the bedroom stair. Conveniently situated among the bedrooms is a bedroom, footman's room, and brushing-room, with electric bell communication with all the bedrooms. The floors above are reached by the service stair, and are given up to women servants' apartments, while the kitchen, pantries, and larders are situated at the back. The topmost floor to the back is utilised as a laundry and wash-house, the roof of which is fitted up as a drying-place. Over the service stair and higher than all the rest of the building is a tank-room for water cisterns. The kitchen and offices are at the top of the house, and are, it is understood, the first of the kind that have been so built in Edinburgh. The kitchen itself is a large and lofty apartment, lighted from the top and north side, with mechanical arrangements for opening either side along its entire length for ventilation. Orders from the dining-room are despatched to the kitchen by means of a pneumatic tube, and one cage of a double-hand lift conveys all food down to the dining-room, the other cage bringing up the dishes, which are at once despatched for cleaning to the dish scullery, close at hand. Every endeavour has been made, and that successfully, in planning the building to provide a quick despatch and a complete separation of those parts of the building devoted to the service from public rooms. To economise labour, besides the dinner-lift a special lift has been fitted up in connection with the still-room and one for the wine cellars, and a powerful hydraulic one for the conveyance of stores from the basement to the top of the house and to any floor. Electric bells and speaking tubes are largely used throughout the building, and ample and comfortable accommodation is provided for the large staff of servants required in a building of such dimensions. The total cost of the site, building, and furnishings has been over 70,000*l.*, the building itself costing 32,000*l.* Mr. R. Rowand Anderson, A.R.S.A., was the architect, and the general contractor for the building was Mr. Arthur Colville, Edinburgh.

### BUILDING IN ROME.

THE population of Rome in 1871 was 244,484, and at the end of 1881 it had increased to 300,467, being an average of 5,598, or 2·29 per cent. a year. A greater extent of habitable ground and building of houses corresponds with the increase of the population, and this is linked with financial speculations, buying and selling operations, contractors' undertakings, and other industrial enterprise giving rise to an important movement in business—the only sort of business this which may be said to be really active, and often very lucrative, in Rome. A Scotch gentleman, who recently acquired ground for building purposes, has stated that he had noticed that, having treated with many people to carry out the transaction and for the commencement of the works, they all belonged to other provinces of Italy—proprietors, speculators, or contractors, who have come to settle in Rome. The original seller of the ground belonged, however, to an old family of the town.

For the first materials porzolana and lime are used; these exist in abundance in the neighbourhood. The cement is partly found on the territory, partly from other provinces or from abroad. Bricks are made in Rome; those for pavements come also from Naples and from Upper Italy, and some from Marseilles. The stone "tufa" is quarried from volcanic remains near Rome. For the travertine stone there are extensive quarries at fourteen miles distance. The masonry is generally solid and well done. The price of building ground in some places the most favourable amounts to 160 lire for each square metre (5*l.* 7*s.* per square yard). In the already populated and trading streets it may even be worth 200 lire (6*l.* 19*s.* per square yard).

From September 1870, to May 30, 1883, the number of rooms in the new houses built in Rome amounted to 51,293, which number corresponds much with the increase of inhabitants; so that one may observe that in Rome a room is built in proportion for each new individual in the population. The capital employed for the construction of a room is calculated at 2,000 lire (80*l.*), which would have given an amount of business done of 4,000,000*l.* in the before-mentioned period for the sole work of private build-

ing. The purchase price of land, and the buying and selling from one hand to the other, which so often takes place, ought to be added in order to calculate with some exactitude the total amount of business done dependent on the building of houses by private individuals in Rome. Lately the annual average of 7,170 rooms has been attained, which corresponds to a sum of 560,000*l.* annually employed; and indeed from October 1, 1881, to September 30, 1882 (12 months), the number of rooms newly constructed was 9,640. The Government and the commune have together spent until now in building works and improvements in Rome about 400,000*l.* a year in the average. Now, the commune of Rome has bound itself to employ 6,000,000*l.* in public works in the course of ten years. Adding what the Government has already decided upon spending, and the private house building in relation with what has been before stated, it is anticipated that in the next coming years an annual expenditure in works of 2,000,000*l.* will be realised.

It is well to make known how much has been done until now and prepared by the Government, and also by the commune of Rome, for this purpose, and what is the general condition of the city of Rome at this moment. The Government have adopted several legislative dispositions which, though apparently different, unite in one only and sole idea—that is, to render Rome more adapted to its high office. The embankment of the Tiber is intended to guard against inundations, the military defences to render Rome secure in case of war; the new streets and public works inside the walls, and the agricultural improvements outside the walls, have for object to increase the commodities of her existence, and surround the city with a healthy, flourishing, and cheerful country expanse. This last project, of the highest interest for the future of Rome, has been defined in a legislative form in the last sittings of the Parliament, after long study and many discussions.

The day's work of a carpenter is ten hours, with two or three hours' interval for dinner. His apprenticeship lasts from the age of ten until he is twenty. A master carpenter earns from 2*s.* to 2*s.* 10*d.* a day, and a workman from 1*s.* 7*d.* to 2*s.* Masons work nine hours in winter, and ten in summer, with a long interval for dinner. The apprenticeship lasts from ten or twelve to the age of seventeen or eighteen. Master masons earn from 1*s.* 10*d.* to 2*s.* 5*d.*, and apprentices and boys 1*s.* 5*d.* to 1*s.* 8*d.*

### GLASGOW ARCHITECTURAL ASSOCIATION.

THE sixth of a course of lectures was delivered on Tuesday night by Mr. James Sellars, the subject being "Fact v. Fiction." There was a large attendance, the president, Mr. P. M. Chalmers, in the chair. Mr. Sellars pointed out to the members, as the coming architects, some causes of the disappointment at times felt by the young practitioner with the imperfect realisation of his fond hopes; more especially regarding the subject of competition were they cautioned, the readiness which architects showed in entering some of these contrasting with the practice of other professions. The matter of estimating and measuring work, its superintendence, and the position occupied by the clerk of works were all considered at length. After some remarks from Messrs. Honeyman, Landless, and Geldard, architects, Mr. Wells, Mr. Buchan, and some of the members, a hearty vote of thanks was awarded to Mr. Sellars.

### THE FORESTRY EXHIBITION, EDINBURGH.

AT the meeting of the Executive Committee of the last International Forestry Exhibition, held in Edinburgh, copies of despatches sent through the Foreign and Colonial Offices were read. Besides the contributions previously intimated from Foreign and Colonial Governments, the State of New Brunswick has promised to send a large collection of their indigenous woods, showing the uses to which they are applied. The Governor of British Guiana has asked for the reservation of a space of 3,000 square feet, and these exhibits will be accompanied by maps illustrating the distribution of the growth of the various woods sent. Within the range of practical forestry, which it is the great object of the exhibition to advance, come the applications of the foresters of our large landed proprietors. These are intended to illustrate in some cases the natural diseases incident to trees, such as that which attacks the larch, &c.; and in others the injuries which have been done to trees by injudicious pruning. The information thus supplied as to the proper treatment of woods will, it is hoped, do much to take away the reproach at present resting on our knowledge of scientific forestry. Wood-working machines of all sorts will muster in great force, and the important wood-pulping industries of Norway and Denmark will be suitably represented.

The Police Buildings, which have been erected at Greenock at a cost of 20,000*l.*, were formally opened on Tuesday.



## SOME NINETEENTH-CENTURY ARCHITECTS.\*

By PROFESSOR T. ROGER SMITH.

THE title prefixed to this paper is so broad, not to say vague, that it will be desirable at once to state more definitely what is to be attempted. It is simply proposed to give some account of a few of the architects, no longer living, who have been for various reasons prominent during the recollection of the writer of the paper, and with most of whom, though not all, he has in some way come into personal relations. Neither the work nor the life of any living architect will be introduced—a circumstance which will remove any inducement to attempt anything so ambitious as a general outline of English nineteenth-century architects; and, in fact, nothing more must be expected than disconnected sketches, fragmentary and slight, but still, it is hoped, capable of interesting you for an hour, and of leaving some impression behind.

Thirty years ago the leading architects may be said to have been Barry, Cockerell, and Pugin, and each of these, in his way, has left his mark upon the architecture of the century.

*Professor Cockerell.*

Professor Cockerell was a man who managed to inspire something like enthusiastic admiration by his high character, his fine works, and the lectures he delivered at the Royal Academy. He travelled far as a student, and during a long time, and was the fortunate discoverer of valuable remains of Greek architecture. He was one of the most accomplished draughtsmen and colourists of his day, and a man of fastidious and refined taste; and his finished drawings, especially those which he contributed to the Academy exhibitions, were masterpieces. His studies, researches, and sympathies all ran in the direction of Classic and of Renaissance architecture; and though he took an interest and some share in the archæological pursuits of his time, I am not aware of his ever having designed or erected any building in any of the Pointed styles. He built for the Bank of England several branches, mostly of Greek architecture, in different provincial towns; and erected public buildings in Oxford, Edinburgh, Liverpool, and London, all of them original in their design and refined in the extreme in their details, but all Classic or Renaissance. Among these works the completion of St. George's Hall at Liverpool was prominent. Elmes, who designed it, died when the shell of the building only was up; and much of the interior, with, I believe, also the architectural surroundings of that splendid pile of buildings, were designed as well as carried out by Mr. Cockerell. He was the surveyor to the Dean and Chapter of St. Paul's Cathedral, and that post gave him an immense amount of pleasure, for he was an ardent admirer of Wren and his work. As Professor of Architecture at the Royal Academy, he delivered lectures which were listened to with profound attention and genuine admiration. Whatever the subject, we knew that we should have plenty of light cast upon it; but we knew also that from time to time there would be thrown out a short sentence of winged words—a maxim, a precept, or a criticism profound, suggestive, instructive—so tersely and often quaintly put that the words would remain in the memory, and so full of meaning that it would furnish food for reflection and consideration for long after. "Be a gentleman," said he one day, "among artists, and an artist among gentlemen." These lectures must have had no small influence on many of those who heard them, and the gallant, generous nature of the man, and the enthusiasm for his art which shone through and brightened up the whole of his life, were quite as influential as his words. Those who had the privilege of knowing him to any extent personally can all bear witness to the charm of his manner, due as much to a straightforward simplicity of character, which was apparent in everything that Mr. Cockerell said or did, as to his singular accomplishments, polish, and ability.

In appearance Professor Cockerell, in the last few years of his life, when alone I knew him, was still strikingly handsome. His gray hair was parted in the middle, his fine features were wonderfully mobile and sensitive, and the expression of his face would constantly vary as conversation went on, now lighting up, now quieting down, in harmony with what he was thinking; while, with the most appropriate gestures, he would emphasise the points of anything that he was saying in a manner more like an Italian than an Englishman.

When after being for some years presided over by a nobleman, a friend of art and artists, the Institute of Architects decided that their President should be a professional man, the unanimous choice of the body fell almost by acclamation on Professor Cockerell; and, when the Royal Gold Medal was granted by the Queen, he was the first architect recommended to Her Majesty to receive it. He was esteemed and recognised by foreign academies and learned bodies, as well as in his own country, and he died full of honours, as well as of years.

*A. W. Pugin.*

A very different kind of man, with very different ways and motives, and exerting a very different influence, comes before us

when we turn from Professor Cockerell to Augustus Welby Pugin. Cockerell was to some extent identified with a style which it seems impossible should ever take permanent root in England. I refer to Greek architecture; and when his work was not Greek it was Renaissance, a style which was beginning to lose ground, and which, though it has been continuously practised ever since, has not been always, or even usually, carried out with the skill, care, and knowledge of detail that mark Cockerell's work.

Pugin, on the other hand, came in on the rising tide of a complete change in taste, and had no small share in directing, popularising, and intensifying that change. His father was of French refugee family, and is best known by the books of Gothic details, and other illustrations of architecture, which he published. His son was his pupil; he was a man of genius and force of character. His knowledge of detail and fertility of invention were immense, but it is doubtful if, with our present experience, we should call him a thoroughly successful architect, as few of his many churches rise to a high standard of excellence. He went over to the Roman Catholic faith, and was chiefly employed on buildings for that form of worship, and his work, though better than that of most men of his day, is often poor and thin, and far from being impressive.

Pugin, however, exerted an immense influence on the progress of the country by his facility as a designer of ornamental metal work, wall papers, glass, and furniture, in all which works he was thoroughly at home, and was constantly fully occupied. He was really the creator of the modern school of art manufacture. He also did much by a series of shrewd, caustic, well-illustrated publications to foster the growing taste for mediæval art and architecture. The "Contrasts" and the "True Principles" are now all but forgotten, but they were as powerful in their day as anything which Ruskin has written has since been.

Pugin was appointed to superintend the details of the wood-carving at the Houses of Parliament, and had also under his charge the metal-work, stained glass, and encaustic tiles, and here there can be no doubt his services were most valuable. Barry was fully equal to the highest work of the architect of the building, which Pugin, even in works of a far smaller calibre, had been barely able to discharge; but it is no disparagement to Barry to say that Pugin was absolutely unrivalled as a master of detail, and that his ornament added a grace to the work which no one else could have so well imparted. Perhaps having alluded to this association, I ought here to refer to the claim, raised long after Pugin's melancholy end and when Barry was no more, that he had been the real designer of the Palace of Westminster. That claim, which it is charitable to consider had its origin in a disordered brain, was finally disposed of by Barry's son; but if anyone is inclined to believe that there was something in it, I would suggest his looking carefully over the vast pile at Westminster and noticing well how masterly is the treatment of the whole, and then crossing to Southwark and inspecting Pugin's most important work, the Roman Catholic Cathedral there. He will find the latter with thin, poor, feeble features, its exterior undignified and its interior by no means impressive, and the better judge he is of architecture the more thoroughly convinced will he be that Pugin, who was so unequal to cope with the moderate difficulties of a church of not very unusual size, was not the man to master the infinitely harder task which Westminster presented.

Pugin built several dwelling-houses which were successful, and he built at his own expense a church at Ramsgate, said to be, though small and simple, his best work. His drawings were wonderfully rough, though effective; but they could hardly have been carried out except by artisans whom he had trained and who understood his intentions; and this he generally managed to accomplish. He must have been a man of immense force of character as well as originality, and he probably did more than any other man to promote what has been termed the Gothic movement.

*Sir Charles Barry.*

Sir Charles Barry ought to be ranked as the foremost architect at least in Great Britain, and possibly in Europe, of the present century. No other man has had so great an opportunity in England in our time as he, and I think no other man has made such good use of his opportunities, great or small, as he made of almost every opening for his talents that was presented to him. In other words, I claim for Barry that he had the most difficult single work to carry out which has arisen, and that he succeeded not only as well, but better than other men have succeeded in less arduous tasks; and that, in addition to this, he has left fewer failures, and a larger proportion of highly finished and admirable performances—apart altogether from the Palace of Westminster—than any English architect of our day.

Probably the two greatest undertakings that an architect can encounter are a church of the dimensions and dignity of a great cathedral, and a secular building of the first importance. Of the two the cathedral may, no doubt, be the higher work of art; but the difficulties of its architect are wonderfully lessened by the fact that it is a product, not of this age, but of some fifteen centuries of continuous unbroken traditions and effect. Limitations, even when they are irksome ones, act as a guide to the architect, and the best designed buildings have probably always been those where

\* A Paper read at a meeting of the Leeds Society of Architects.



site or use prescribed many conditions which it was impossible to escape from, and the worst those where the architect has absolute *carte blanche*. The architect of a great secular building has often little or nothing by way of precedent to guide him. The requirements are modern ones; the scale of expenditure is dictated by the resources of communities whose wealth has been amassed since the invention of steam; and so the designer of a parliament-house or a palace of justice has to originate the *idea* of his building as well as its features, to an extent which is not required of, or indeed possible to, him who designs a cathedral.

Barry was blessed with genius and strong will, a sound constitution, a fertile invention, great constructive ingenuity, and that combination of fine qualities, natural and acquired of taste, eye and hand which go to make an accomplished designer and draughtsman. He had few advantages in the way of early education, but had a long and probably very useful apprenticeship in an office where much of the more prosaic detail of surveyor's work fell to his lot, as well as pure architecture. He inherited a little money at the time when he could best use it, and wisely spent it in a prolonged period of study on the Continent. He was absent more than three years, and travelled and studied during that time in France, Italy, Greece, Turkey, Egypt, Palestine, and Syria; and thus his preparation for professional life extended over no less than ten years, from the age of fifteen to that of twenty-five; a commentary on the notion now not unusually entertained that three years in an office are amply sufficient preparation for the arduous and complicated duties of an architect's profession.

In the early period of his practice Barry built several churches which were not much in advance of the imperfect Gothic of sixty years ago; but in 1824 the Royal Institution at Manchester, from a refined Renaissance design, and one of the works which shows the peculiar bent of his genius was erected; and in 1829 the Travellers' Club House, a comparatively small but very successful work in Italian Renaissance, was gained in limited competition. The Pall Mall front of this design was more or less based on the Pandolfini Palace, in Florence, but the beautiful garden front was strikingly original, and the plan is as happy a composition as any architect could desire to produce. After this success there is no doubt that private commissions, with from time to time a public work, would have continued to occupy Barry; and the way in which they were discharged would have marked him out as distinguished among his contemporaries for skill in design, refinement of detail, and cleverness in planning, even had no great opportunity presented itself. But such a chance came to Barry as no one since Wren's day has enjoyed. The Houses of Parliament were destroyed by fire on October 16, 1834, and after various delays a public competition was instituted, with the result that Barry's design was accepted in 1836, and the work actually began in the following year. From that period till his death in May 1860, he was constantly at work on this great undertaking, which was all but completed at his death. The long period of nearly, if not quite a quarter of a century, during which his active mind and pencil were busy on this building, allowed time for not a little recasting of the design; and though I believe it may be said that the plan was never varied in any essential feature, the treatment gradually changed from Elizabethan to Tudor, and a far greater degree of richness than had been at first thought of was introduced.

The works at Westminster became a real school of art. Barry had the talent (indispensable to the man who would do a great work well) of getting round him men of ability and power as assistants, and he knew how to trust them. Pugin's engagement led to the formation of a kind of museum of works of Tudor decorative art, and many carvers in wood and stone and workers in metal got their best art training in the workshops at Westminster. Mr. Thomas, who looked after the stone-carvers, was a sculptor of the highest talent. Pugin, as we have already seen, directed the wood-carving, metal work, and stained glass; and men of unusual ability were found to fill the posts of clerks of the works. The long and unhappy controversy with Dr. Reid, who was to have arranged the ventilation, and did not, and many other disputes and troubles which are now happily forgotten arose in the course of the undertaking. No doubt for some of these Barry was to blame. He was constantly improving the building, and this means constant change; and, though the result of his efforts was an immense advance upon original ideas, there were many bitter complaints about expense and delay; indeed, it is not too much to say that these complaints and the publicity given them tended for years to render the position of other architects engaged on other works more difficult, and made their relations with their clients less confidential than would have been otherwise the case. A curious and unfortunate result of the great length of time which elapsed was a change in public taste, or at least in fashion, which interfered very much with the due appreciation of this fine building as it approached completion. In 1834 Tudor was quite the fashion, and that portion of the public who cared for architecture, and those architects who practised Gothic, were pretty generally agreed in its favour. Long before 1860, however, the general taste had gone back from Tudor to Decorated, and from Decorated to, or towards, Early English, so that I well remember being told gravely by a man, now of great eminence,

that he did not consider the Palace of Westminster Gothic at all!

There can, however, be no doubt that the influence, direct and indirect, of this great work was extremely powerful and lasting, and that the perfection with which it was wrought out has contributed materially to that influence. The architect has shown himself master of his work, and whether we regard the splendid plan, the general design, the varied sky-line, the beauty of the towers, or the high finish of the detail, we have a building of which England may be proud, and one which fortunately is designed in a style more entirely and peculiarly English than any that either preceded or followed it.

Of Barry's other works only the most prominent can be mentioned. He gained the Reform Club in a limited competition, and at a later period he built, not far from it, Bridgewater House. In London he also erected the Treasury and the College of Surgeons, and these buildings, with those above-mentioned, form his chief record in the metropolis. Out of London there are several princely mansions, such as Cliefden and Clumber, and several public buildings, such as Birmingham Grammar School, and his last and most florid Renaissance work, the richly-ornamented Town Hall at Halifax, to bear witness to his skill.

My personal recollections of Sir Charles are confined to seeing him occasionally at the Institute, where, however, I do not think he often took much part in what was going on, and to one interview from which I came away a good deal impressed with the strong impenetrable manner of the man. I remember well feeling that if one had wanted to persuade him one might as well have talked to a stone wall; and yet it is stated that Barry was very accessible to the advice, and valued highly the opinions of those on whose judgment he could rely on points of construction, and even in artistic matters. Barry published no books, but his official reports and memoranda, of which he had to prepare many, were excellent specimens of clear statement and cogent powerful reasoning in good clear English. He was buried in Westminster Abbey, as were also Scott and Street, and the first time that a flag was raised on the newly-erected flag-staff on the summit of the Victoria Tower of his great work, was when it was hoisted half-mast high on occasion of the architect's funeral.

#### *Sir William Tite.*

The names of some other architects who practised chiefly in the Classic styles must be passed over with rapidity. Among them were Sir Robert Smirke and Sydney Smirke, with neither of whom was I ever brought into contact, and Sir William Tite, a prominent figure in London professional life for many years. Tite was an excellent man of business and made a large fortune, much of it, however, being gained by work in connection with sales and purchases of land, and railway compensation cases. He had the reputation of being a dangerous opponent and a firm friend. He was a man who was proud of his profession, and was generous towards it; and his position as an influential member of Parliament enabled him now and then to stand up for architects and architecture. A tall man—but not handsome—strongly built, with deep lines in his face, a strong voice, he had a singular power of removing all expression from his countenance if he was hearing things he did not agree with; but he could show himself genial, courteous, and kind when business was over. His best and best-known work was the Royal Exchange, which he obtained in competition, the choice having ultimately lain between his design and a very beautiful one by Professor Cockerell.

#### *Mr. Hardwick.*

Mr. Hardwick, an architect like Tite, better known in London than elsewhere, has a strong claim for mention in any paper by the present writer. He was a man of great personal ability and highly esteemed, as singularly upright and honourable. His skill in planning was great, and he was among the first to inaugurate, at the Euston Terminus, the system of railway hotels which has since become so common. His best work was Goldsmiths' Hall, London, an admirable building for its purpose, whether its skilful planning or the general appropriateness of the dignified architectural treatment be taken into account. He was also the architect of the picturesque hall and library of Lincoln's Inn—an excellent Tudor building—which was, however, to a great extent carried out (in conjunction with him) by his son, Mr. P. C. Hardwick.

#### *T. H. Wyatt.*

An architect better known in the provinces, and, like Hardwick, one of a family of architects, was Thomas Henry Wyatt, a most genial man, and a successful practitioner. His best-known work, perhaps, is the Liverpool Exchange, but he obtained many commissions in various parts of England, and led a life of great activity. He, like Cockerell and Tite, was President of the Institute of Architects, and in that position his devotion to his duties and his kindly cordial manner made him very welcome both to the general body and his colleagues on the council. At the time of his death he was erecting a very interesting work—the Consumption Hospital at Brompton—which has been completed by his son.



*Sir Matthew Wyatt.*

From Thomas Henry Wyatt we pass naturally to his younger brother, Sir Matthew Digby Wyatt, who was a more brilliant man generally, and perhaps better known, but hardly so successful as an architect. Digby Wyatt was a highly-cultivated man, most industrious, most energetic, and almost universal in his knowledge of the Fine Arts. His studies and his sympathies were, however, turned chiefly in the direction of Renaissance, and especially Italian art. He had a fine critical taste, and his judgment on points connected with pictures, sculpture, enamels, decorations, was rarely at fault. He was a rapid and effective draughtsman, and altogether an accomplished scholar, artist, and man of the world.

As a young man Wyatt worked a good deal on the preparations for the Great Exhibition of 1851, being, I believe, secretary to the Commissioners for part of the time. When it was proposed to establish the Crystal Palace at Sydenham, Digby Wyatt and Owen Jones were sent all over Europe to obtain casts of sculpture and architecture, and collected that superb gallery of specimens which buyers have forgotten at Sydenham, and which unhappily few architectural students ever look at, much less study.

For the Crystal Palace Mr. Wyatt wrote several of those excellent manuals on art which were published by the directors at the opening, and which now few people know of. He also wrote or edited two or three books on art subjects.

He held the appointment of architect to the Indian Government, and in that capacity designed and carried out the very beautiful Renaissance interior of the India Office, which was probably his finest work, though he erected some excellent houses of large size, and some other public buildings.

Wyatt's influence was mainly directed towards keeping up the traditions and knowledge of Italian and other Renaissance work. His sympathies with Gothic were not keen, and his weight, which was not inconsiderable, was thrown into the opposite scale. He was a most energetic worker, and in fact wore himself out, and had to retire from active practice almost in the prime of life, with his health impaired, unfortunately too seriously for its restoration to be possible. Wyatt was a man of a commanding appearance—tall, strong, with a dark beard, and a fine presence, he could not for a moment be overlooked. Speaking several languages, familiar with many countries, on terms of intimacy with all artists and many persons of distinction, he was at home and at ease in any society and under any circumstances. He was a ready public speaker, an excellent man of business, a good writer, and a clever designer, and being so much, we need hardly add that he was one of the men who raise the credit of our profession, and of whom we ought to be proud.

Wyatt was genial among acquaintances, and trustworthy with friends. I was once concerned with him and Owen Jones in affairs of no small importance, of which I had had little previous experience and they much; and the cordial yet delicate way in which they both let me have the free use of the results of their practice is one of the pleasant things which one not only desires never to forget, but which, when an opportunity like the present offers, one is bound to put on record, and to commend to others as an example.

*Owen Jones.*

Owen Jones, whose name was at one time constantly associated with that of Digby Wyatt, was an artist in the truest sense of the term, and one of the first architects of his day, if abilities are to be taken as a test. He was a highly-educated and accomplished man, and spent, while a young man, much time and no small sum of money in studying and making known to the public the decorations of the Alhambra Palace in Spain. His volume on this building is one of the few fine architectural publications that this country has produced, and its publication made a fame and a position for its author. The Great Exhibition furnished him an opportunity for becoming famous, since he designed and successfully carried out the simple but telling decorations it received; he also planned all the plotting of the space in the building. The success of his colouring led to no small amount of decoration work, and to a great development of other sorts of occupation in connection with the Sydenham Crystal Palace. Owen Jones built the St. James's Hall in London, one of the most original interiors of modern times, and one of the most successful of music-rooms. But though a good deal of work, some of it of an interesting character, passed through his hands, several of his best designs were unsuccessful. He had a very thorough knowledge of the qualities of iron, and far better ideas of how to treat it so as to make it effective than most architects, and he designed a magnificent iron building to stand where the ill-starred Alexandra Palace now stands, and another for erection at Saint Cloud, neither of which, it is hardly necessary to say, ever was carried out. Owen Jones was one of the men with a logical mind who think out the matters to which they turn their attention thoroughly, reduce them to the first principles, and thus can attain something like absolute certainty where common minds cannot get beyond a vague notion. He thoroughly knew what he wanted to arrive at, what means to employ, and what the result of these means would be; and he was thus able to go to work with a directness which gave him prepon-

derating influence. He was a man of striking personal appearance, of very courteous manners and rather retiring disposition; he was a great ornament to our profession, and by his practice and his writings, which though few and short, were cogent, he helped not a little to advance the use of coloured decoration and the right understanding of the principles upon which it should be designed.

The name of Sir Digby Wyatt, whom we reached a moment ago, recalls another set of associations besides those connecting him with Owen Jones. He was one of the examiners in the first Voluntary Examination. The rule which I have laid down for myself prevents my going into the history of all that preceded that event, one of great importance to our profession, for, happily, several of those who carried on the movement which led up to it are still living among us; and without referring to them, and, above all, to my friend and predecessor at University College, who, as honorary secretary of the Institute, made the examinations possible, the story could not be told. Of the five architects, however, who actually conducted that examination (which took place in 1863) the speaker is, alas! the only one left. The three examiners were Sir Gilbert Scott, Sir Digby Wyatt, and Mr. Arthur Ashpitel; the two moderators, Mr. John W. Papworth and Thomas Roger Smith. Let me say a word or two about Ashpitel and Papworth, as, unlike Wyatt and Scott, they might hardly on other grounds enter into our enumeration.

*J. Papworth.*

Mr. John Papworth was a man of extensive attainments, a vast power of work, and an energetic nature. He was one of those who devoted much time and trouble to the elaboration of the scheme of examination and the preparation of the comprehensive list of books which once formed part of it; and he was of great service in that rather troublesome duty, for he shrank from no amount of trouble or pains. There was nothing connected with architecture which he did not know, or, at any rate, did not know about, so that on any subject he could either furnish the information required or tell where it must be sought for. In many matters, such as the work of the Architectural Publication Society and of the Institute, especially in connection with the formation of our library, he rendered essential but unobtrusive service to our profession, and any who knew him will consider that his name ought to have a place among our worthies.

(To be continued.)

**Buckfast Abbey.**

SIR,—In an article on Buckfast Abbey, Devon, which appeared in your paper a week or so since, but which owing to absence I have only just read, the author, Mr. Tom Burgess, F.S.A., says that in the explanatory remarks made by me before a meeting of the Society of Antiquaries, of what was being done at Buckfast under my direction, I appeared not to be aware of the existence of a detailed account of the abbey by Mr. Brooking Rowe, F.S.A. I cannot think how I could have led Mr. Burgess to suppose this, as at the meeting in question I read from Mr. Rowe's book itself the description of the buildings as existing at the end of the last century, which Mr. Burgess inserts in his article. I also prefaced my remarks by giving Mr. Rowe as my authority. I may add that it was the clue given by Mr. Laskey's description of the ruins, in the *Gentleman's Magazine* of 1796, which Mr. Rowe quotes, that guided me to the discovery of the foundation of the abbey church and other monastic buildings uncovered up to the present time. Before last December no trace of these buildings save "the abbot's tower" were visible, the whole having been carefully covered over and levelled at the beginning of the present century. I should be obliged by your kindly inserting this letter.

I am, Sir, yours faithfully,

4 Great Queen St., Westminster:

February 25, 1884.

FREDK. A. WALTERS.

**Llanely Hospital Competition.**

SIR,—In some references which have been made to this competition it has been stated that the designs of Messrs. Wilson & Dyer, of London and Swansea, were placed second by Mr. Salter, the referee.

Will you permit me to say that the order should have been reversed, and the note have read thus:—"Wilson & Dyer, joint architects, of Swansea and London."

Your obedient servant,

CHARLES E. DYER.

2 John Street, Bedford Row, W.C.

**The Death** is announced of Mr. William Huggins, the animal painter, at Christleton, Chester, aged 63.



## WORKS IN PROGRESS.

**The Morningfield Hospital**, King's Gate, Aberdeen, now in course of erection under Messrs. W. Henderson & Son, architects, of that town, is being warmed and ventilated throughout by means of Mr. E. H. Shorland's Manchester grates.

**Messrs. Burt & Potts**, of York Street, Westminster, are now supplying the whole of the iron casements for St. Paul's New School, Hammersmith, under Mr. A. Waterhouse, A.R.A., and also those for the Turner Memorial Home, Liverpool, under the same architect. They are also supplying large quantities for several other mansions in different parts of the country.

**Haseley Manor**, near Liddington, Oxon.—Mr. Tollit, architect, of Oxford, has been executing extensive alterations at this residence, and has fitted the place throughout for gas, which is supplied with one of Müller's patent Alpha gas-making machines for 60 lights, the piping being supplied and laid, and also the machine supplied and fixed, by the patentee, Mr. H. L. Müller, of Birmingham.

**Ashby Lodge**, near Kilsby.—This residence is being considerably enlarged, under the superintendence of Mr. Tollit, architect, of Oxford, and the place fitted with gas to be supplied by one of Müller's Alpha patent gas-making machines of 150 lights, this work being done by the patentee, Mr. H. L. Müller, of Birmingham.

**Messrs. Mappin & Webb** have supplied the very handsome Abbotsford stoves in use at the new Princes Theatre, in Coventry Street, which are giving great satisfaction.

**The Great Northern Railway Company** are establishing a new hospital for horses at Finchley, and are providing a very well-constructed Turkish bath, to be used in the treatment of sick horses. The bath is to be heated by the convoluted stove which has been patented by Mr. Joseph Constantine, of Oxford Street, Manchester.

**A New Memorial Home for Incurables** is being erected at Lisburn, near Belfast, from plans prepared by Mr. Godfrey W. Ferguson, Lombard Street Chambers, Belfast, the contractor being Mr. Robert Corry, also of Belfast, and Messrs. R. Waygood & Co., of Falmouth Road, London, have received instructions to erect one of their patent hydraulic balanced passenger lifts for the use of the patients.

**The Order for the Mosaic Flooring** for the new building of the Birkbeck Institute has been placed in the hands of Messrs. Diespeker & Co., 40 Holborn Viaduct. The same firm have also received several orders from Glasgow, in consequence of the excellent workmanship of the mosaic which they have been laying at Glasgow University buildings, from the designs of the architect, Mr. John Oldrid Scott, F.R.I.B.A.

**Stained Glass**.—Messrs. Garvie & Sons, builders and decorators, Aberdeen, have lately fitted up, in connection with their Union Street premises, the requisite appliances for carrying out the manufacture of cathedral glass, and have secured special artists for the work.

**A New Factory** has been just completed in Stanwell Street, Colchester, for Mr. Kavanagh, from plans by Mr. J. F. Goodey, of Colchester. The arrangements include a lift driven by an Otto gas-engine, and provided with a safety apparatus to prevent accident, in the unlikely event of the steel wire rope giving way. This apparatus has just been tested in the presence of the Mayor and Corporation, a trolley of goods being placed on the lift on the top floor and the wire rope removed, an ordinary hempen cord having been previously attached. The man who works the lift then stepped into the trolley upon the lift, and with a knife severed the rope which held it suspended. In an instant the apparatus on either side of the lift gripped the uprights, and the lift was brought to a dead standstill, the descent in consequence of the severance of the rope being only about 3 inches. The experiment was pronounced by all to be a complete success. The premises were fitted up by Mr. A. Chambers, of Magdalen Street, and the lift and gas-engine were supplied by Messrs. R. Waygood & Co., of Falmouth Road, London.

**Ornamental Wrought-Iron Gates, &c.**, by Messrs. Barnard, Bishop & Barnards, Norfolk Ironworks, Norwich, and London, E.C., have been erected at the Great Eastern Railway Depot, Bishopsgate, E.C. The principal entrance facing High Street, Bishopsgate, is fitted with a pair of wrought-iron gates, 28 feet wide by 10 feet high, hung upon brick piers. The design is of a florid character, and in it are represented fruit, flowers, fish, &c., indicative of the purposes to which the market is devoted. The arms of the company are effectively introduced in the centre of each leaf. At right angles to these, and serving as the entrance up the incline to the depot, is a mighty single gate 28 feet wide by 16 feet high; this is constructed in one leaf, and is hung upon a substantial ornamental cast-iron pier (surmounted by four very large and handsome lamps). This pier alone weighs 11 tons, and the foundation is entirely of iron. It may here be remarked that no quadrants are used for the hanging of this gate, which is only

supported by the pier. This gate has to swing up an incline of 15 inches to 18 inches, and, owing to its weight (some 3 tons), special machinery has had to be constructed for opening and shutting it. This machinery is contained in the wall at right angles to the gate. A similar gate, but of even larger dimensions, 30 feet by 16 feet, forms the entrance at Wheeler Street, and several other pairs of gates of a highly ornamental character, and of great size, shut off the public at various points in the depot. All these gates are constructed with small "clicks" for the ingress of passengers.

**Messrs. Suffling & Co.**, 143 Edgware Road, have just finished the stained glass windows for Almond's Hotel, Clifford Street, Bond Street. Those in the dining and smoking rooms are of large dimensions, and are very unique in their treatment, great brilliancy being imparted by the judicious employment of Venetian fluted glass. The lobby of the dining-room is glazed in roundel work. The same firm last week fixed the new west window in Esher Church, Surrey, replacing the very dilapidated one which was partly blown out by the January gales. The new window is of painted and stained quarry work, and in the large tracery rose bears the sacred monogram and other devices.

**The Approaching Building Trades Exhibition at the Agricultural Hall**.—The arrangements for holding this exhibition, from March 24 to April 5, are proceeding in the most satisfactory manner under the active management of Mr. Philip Shrapnell, the secretary. So far as the number of exhibits are concerned, at present they are about the same as last year; but it is not at all unlikely that by the day of opening they will be in excess of 1883. A large number of architectural drawings will, as before, be exhibited in the galleries; and we are promised some new features in sanitary appliances, ventilation, and heating apparatus. A new grate, made on smoke-consuming principles, and recently introduced into the London market, will be amongst the latter. Speaking from our present knowledge, we have reason to believe that the display generally will be as varied and interesting as in former years.

## CHURCH BUILDING AND RESTORATION.

**Garforth**.—An organ-loft has just been built in the north transept, and the organ moved from the west end and erected therein. The front of the gallery is an arcading of pitch pine, with traceried and cusped heads and moulded and battlemented cornice, the centre portion of the front projecting so that the organist can have a view of the choir. This projection has canted sides, and is carried on moulded brackets. The ceiling under the gallery is richly panelled in pitch pine, with moulded ribs. New windows have been inserted beneath the gallery to give light to the transept. Additional choir stalls have also been provided. The work has been carried out by Mr. John Hall Thorp, of Leeds, under the superintendence of and from designs furnished by Messrs. Smith & Tweedale, architects, Park Square, Leeds.

**Walsall**.—Some time back Mr. Butterfield was asked to inspect and report upon the state of St. Mary's Church, Walsall, and he has now presented a detailed report to the church council, who will shortly lay it before the parishioners. The results of his investigation are as follows:—Estimating the weight of lead necessary for re-covering the roofs, fixing gutters, &c., at 48 tons, the cost in this direction would be about 1,650*l*. A further sum of 2,800*l*. will be required for building up masonry to the lower part of the eight side windows, repairing windows, balustrades, vases, parapets, and cornices, and internal masonry. A sum of 250*l*. is estimated as necessary for a tile floor, and 1,200*l*. for oak seats in the nave, aisles, and transepts. The total estimate is 6,250*l*., from which the value of old lead and other material will have to be deducted. Mr. Butterfield thinks that another sum of 3,500*l*. will be needed for repairs to tower; but in order to make a reliable calculation, it will be necessary to examine the tower from a scaffolding.

**Shrewsbury**.—St. Julian's Church has been reopened after alterations and renovations, which have been carried out from the designs of the late Mr. S. Pountney Smith. The interior has been covered with a thick coat of concrete, on which the new wood and tile floors are laid. The nave and aisles have been re-seated with open seats, in which the old oak has been used as far as possible. The passages of the nave and of the chancel are laid with Messrs. Maw's encaustic tiles, those of the chancel exhibiting a handsome design. The windows of the south side have been re-glazed with rolled cathedral-tinted glass. The colouring of the walls and the whole of the other decorative work have been executed by Mr. John Robinson, St. Mary's Street. The lighting is by means of coronæ and brackets, supplied by the Shrewsbury Gas Company, and the warming by hot water, the pipes being kept above ground, and branching into coils in the vestibules and window spaces, and executed by Mr. W. B. Morris, of Pride Hill. The contractor for the re-seating and general builder's work has been Mr. H. T. Darlington, of the Wyle Cop. On removing the panelling and plaster of the old vestry, traces were found of a pointed arch on each side, north and south of the tower space, in the position proposed for the new entrances; but the masonry which supported



the arches, and through them the entire weight of the tower, was in a terribly shattered condition. All the defective work has been removed, and by shoring and under-building the fabric of the tower has been made firm and secure. The space beneath it now forms the baptistery. Since the death of Mr. Smith the work has been carried out by Mr. J. Nurse, the principal assistant.

**Kirkliston, W.B.**—The parish church, an interesting building of the twelfth century, has been reopened after being closed during the past nine months for repairs and additions. The work has been carried out under the care of Mr. Rowand Anderson, architect, of Edinburgh.

**Hereford.**—The foundation-stone of a church for the White-cross district has been laid. The building is designed by Mr. F. R. Kempson, of Hereford, in the thirteenth-century style, and will consist of nave, chancel, chancel aisle, organ chamber, vestry, north and south aisles, south porch, tower and spire, seating accommodation being provided for at least 600 people. The foundations for the whole building have been put in, but the nave and north and south aisles and south porch and heating chamber only will now be erected. The contract for this part of the work is 3,800*l*. The nave is divided into five bays, and is 27 feet wide by 90 feet long. The aisles are lean-to, and the porch is placed opposite the fourth bay from the east. The church is lighted by seven three-light windows, one two-light window in each aisle, and ten clerestory windows in the nave, six lancets in the west end of the nave, and two lancets in the west end of aisles. Messrs. Huckson & Warwick are the contractors.

**Alne.**—The church of Alne, in the rural deanery of Easingwold, York, has been reopened after having undergone thorough renovation. The church is a Norman structure, with a richly carved Norman doorway, and arch opening to the tower, which is manifestly a subsequent addition. In the interior of the church there is also a Norman font. The gallery on the north side has been removed, and the high-backed pews have been replaced by open seats of oak, erected by Mr. Wilson, of York, from designs by Mr. E. Willink, architect, of Liverpool. The floors of the aisles have been laid with large flags, inlaid with squares of encaustic tiles. The chancel has been re-seated by Mr. Taylor, of Alne, and has been re-laid with encaustic tiles from the works of Messrs. Goodwin, of Lugwardine.

### SCHOOL BUILDINGS.

**Bromsgrove.**—The erection of a school for young children and infants has just been commenced at Sidemoor, near Bromsgrove, according to plans recently selected in competition by this Board, and approved by the Education Department. It will accommodate 150 children. The contractors are Messrs. Read & Sons, builders, Birmingham Road, Bromsgrove. Mr. F. J. Yates, 1 Colmore Chambers, New Hall Street, Birmingham, is the architect.

### ARCHÆOLOGY.

**Discoveries near Rome.**—A discovery of statues, busts, and other works of sculpture, almost equalling in number and importance those found in the atrium of the House of the Vestals, has just been made at a place called Il Sassone, situated between the town of Marino on the Alban Hills and the farm of the Frattocchia, where, at the beginning of the last century, the Constable Colonna was wont to receive and entertain the Popes on their way from Rome to Castel Gandolfo. At that spot the remains of a very extensive villa, ascertained to have belonged to the Voconia Gens, are now being excavated by Signor Boccanera. There have been dug out no fewer than eighteen pieces of sculpture, including statues of Marsyas, of an athlete, a faun, a genius, a Silvanus, and a copy of the Laocoon—the first ancient copy of this group that has yet been found—five marble candelabra, a bust with a curious kind of Phrygian cap, a group of an eagle devouring a lamb, and several pieces of marble, vases, and very fine bas-reliefs. The Marsyas, the athlete, the bust with the Phrygian cap, and the eagle with the lamb all exceed life size, the Marsyas measuring three metres in height. The others are less than the size of life, and the copy of the Laocoon is smaller than the original.

### ART WORKMANSHIP.

**Lincoln.**—A new font has been placed in the church of St. Swithun, Lincoln. The font is octagonal in plan, and upon each face is an arched and cusped niche finished with a crocketed pediment, and at the angles are panelled and gabled buttresses. The panels of the sides are square, and have the following carvings:—The crossing of the Israelites through the Red Sea, the sacred monogram, lilies, and the symbols of the four Evangelists. The tracery is filled in with conventional foliage of varied designs, and adds much to the general appearance. The bowl is massive,

being in one piece of Ancaster stone. It stands upon a shaft consisting of a large central block with eight Irish red marble columns around it, one at each angle. The font stands upon a high step of polished red marble, octagonal in form, with the alternate sides projecting in the shape of a cross. The carving has been executed by Mr. Barrett, and the work has been done from the designs and under the immediate direction of Mr. James Fowler, architect, Louth.

**Messrs. Cotterell's Paper-hangings.**—The city of Bristol has in Messrs. Cotterell one of the most enterprising firms in England. Their collection of wall-papers will, for excellence and variety, stand a comparison with the first Metropolitan houses in the trade. It is their custom to prepare every year pattern-books of the papers in stock, and from the extent of Messrs. Cotterell's trade it is necessary to use for that purpose more than eighteen thousand pieces. We have examined some of the new books, and can testify to the good taste with which they are compiled, and the tact with which present fashions are met. It would be difficult to meet with a tawdry piece of wall-paper among the patterns, although the prices range from 3*d*. to 10*s*. a piece. The new washable papers are seen in many varieties. Architects and builders in the district must find it a great advantage to have so select a stock available, and Messrs. Cotterell are now able, owing to the cheap rates offered by railways, to send their papers to all parts of the country.

### TOWNS IMPROVEMENT.

**Blaydon-on-Tyne.**—Acting under the instructions of Mr. Frank Parmeter, the newly-appointed receiver of a portion of the Towneley estates, Mr. T. C. Nicholson, architect, 24 Grainger Street West, Newcastle-on-Tyne, has just prepared a plan for extensive building operations at Blaydon-on-Tyne. The plan indicates twelve acres of land belonging to the representatives of the late Colonel John Towneley, and is laid out for freehold building sites. The front streets will be 36 feet in width, a width of 18 feet being allowed for the back streets. All the houses will be self-contained, and will have large yards behind. For some years past there has been a demand for houses in the Blaydon district; but, with the exception of the ground laid out by Sir Henry Clavering, there has been no freehold land in the market; and this circumstance led to the decision to allot this portion of the Towneley Estate for building sites. Should the twelve acres already planned not be sufficient, and with the rapidly increasing population of the district the demand is likely to continue, other portions of the estate contiguous to the above will also be offered to builders. The streets will be, as it were, enclosed on two sides, being bounded on the east by Shibdon Dene, a wooded ravine, and on the west by Blaydon Bank, a deep cutting.

### GENERAL.

**The Competitive Designs** for the proposed new War Office and Admiralty are to be addressed to the "judges," and must be delivered before twelve o'clock noon, to-day (Saturday), into the custody of the Clerk of the Works, Houses of Parliament, at the St. Stephen's Porch entrance, in Abingdon Street, and not at the Office of Works.

**Mr. J. M. Gray** has been nominated as curator of the National Portrait Gallery which is to be established in Edinburgh.

**Mr. William Morris** on Monday delivered a lecture on "Art under Competitive Commerce," at the Town Hall, West Bromwich, in connection with the scheme for the establishment of an educational institute.

**A Fine Art Association** is to be formed for the university, town, and county of Cambridge, and a provisional committee was appointed for the purpose at a meeting held on Tuesday under the presidency of Mr. Redfarn, the mayor.

**The Late Mr. J. Moffat**, of Port Glasgow, has left 3,000*l*. to provide a free public library for that town, while the residue of his fortune of 100,000*l*., after paying certain legacies, is to be devoted, it is understood, to the founding of an orphanage on his estate of Carnegie, Port-Glasgow.

**A Building** is to be erected in Weston Park, Sheffield, at a cost of not less than 15,000*l*., to accommodate the collection of paintings recently left to the town by the late Mr. Mappin, of Birchlands. The building will be erected so as to admit of extension, with a view to other bequests.

**The Spire of the Church at Kidwelly**, Carmarthenshire, 180 feet high, and one of the highest in Wales, has been struck by lightning, which carried away 30 feet of masonry.

**Messrs. Grainger & Naish**, of Adelaide, have secured the third premium in the competition for the erection of Government offices at Brisbane, for their plans designed in French Renaissance style.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MARCH 1, 1884.

### CONTRACTS OPEN.

ASHTON-UNDER-LYNE.—For Building Shop and Cottages at Greenfield. Messrs. John Eaton & Sons, Architects, Ashton-under-Lyne.

ASTLEY BRIDGE.—March 3.—For Boundary Walls, Iron Rails, Entrance Gates, &c., for Cemetery. Mr. J. Lomax, Surveyor, 11 Fold Street, Bolton.

BALIFFE BRIDGE.—March 6.—For Building Mill. Mr. E. Bull, Clare Hall Road, Halifax.

BARNSELY.—March 4.—For Building Three Houses, Blacker Hill. Mr. William Guest, Blacker Hill, Barnsley.

BELEFAST.—March 13.—For Sheds, &c., for Agricultural Show. Mr. W. Hastings, Engineer, Victoria Hall, Belfast.

CALVERLEY.—March 10.—For Works in Building Weaving Shed at Mill. Mr. Jowett Kendall, Architect, Idle.

COBRIDGE.—For Building Methodist Chapel and Schools. Mr. A. H. Goodall, Architect, Nottingham.

CORK.—March 5.—For Additions to Harbour Commissioners' Offices. The Engineer, 10 Lapp's Quay, Cork.

DROGHEDA.—March 14.—For Works at St. Mary's Church. Mr. J. F. Fuller, Architect, 179 Great Brunswick Street, Dublin.

DUNGENESS.—March 6.—For Building Hotel. Messrs. Burrell & Valpy, Architects, 5 Victoria Street, S.W.

EASINGTON.—March 12.—For Additional Buildings to Workhouse. Mr. John Dote, Clerk to the Guardians, Easington.

ELLAND.—March 5.—For Building Warehouse. Messrs. Jackson & Fox, Architects, 22 George Street, Halifax.

GOLCAR.—March 4.—For Additions to Residence. Messrs. John Kirk & Sons, Architects, Huddersfield.

GUILDFORD.—March 7.—For Buildings and Boundary Walling in connection with proposed Hospital. Messrs. Peak, Lunn & Peak, Architects, 3 Market Street, Guildford.

HARROGATE.—For Building Bank and Business Premises. Messrs. H. E. & A. Brown, Architects, James Street, Harrogate.

INVERNESS.—March 3.—For Alterations at Northern Meeting Rooms. Messrs. Matthews & Lawrie, Architects, 2 Church Street, Inverness.

LEAVESDEN.—March 4.—For Erection of Building at Schools. Mr. H. Robinson, C.E., 7 Westminster Chambers, S.W.

LEEDS.—For the Erection of New Premises for Messrs. Julius Sewell & Co. Names to be sent to the Architect before March 8. Mr. William Bakewell, Architect, 38 Park Square, Leeds.

LIVERPOOL.—March 5.—For Contracts No. 4 and No. 5 at Zoological Gardens. Messrs. W. Sugden & Son, Architects, Leek.

LOSSIEMOUTH.—March 15.—For Works in Building Public Hall. Mr. D. Cameron, Architect, Inverness.

LOWER WORTLEY.—March 3.—For Building Methodist Chapel and School. Mr. T. Howdill, Architect, 40 Park Lane, Leeds.

MIDLAND RAILWAY.—March 7.—For Construction of Gas Works, Bromsgrove. Drawings, &c., at the Clerk of Works' Office, Camp Hill Station, Birmingham.

MIDLAND RAILWAY.—March 7.—For Additions to Engine Shed, Bath. Drawings, &c., at Clerk of Works' Office, Temple Meads Station, Bristol.

MIDLAND RAILWAY.—March 7.—For Repairs and Painting, Giggleswick Station. Specifications at the Engineer's Offices, Derby.

MIRFIELD.—March 26.—For Building Warehouse, Willey Rooms, Tenter Stoves, &c. Messrs. Kirk & Sons, Architects, Dewsbury.

MORLEY.—March 1.—For Building Minister's House. Mr. A. Battery, Architect, Queen Street, Morley.

NEWPORT.—March 13.—For Erection of Gasworks. The Engineer, Gas Offices, Mill Street, Newport, Mon.

ORMESBY.—March 5.—For Additions to Railway Station. Mr. W. Bell, Architect, Railway Offices, Northgate, Darlington.

PETERBOROUGH.—March 7.—For Alterations to House, Priestgate. Mr. H. M. Townsend, The Precincts, Peterborough.

PRESTON.—For Building Wesleyan Chapel. Mr. Robert Curwen, Architect, 103 Palace Chambers, Westminster, S.W.

SHELF.—March 1.—For Additions to Dean House. Mr. H. Oddy, Dean House, Shelf, near Halifax.

STALHAM.—March 10.—For Building Baptist Chapel and School. Mr. G. Baker, 28 Queen's Road, Yarmouth.

ULVERSTON.—March 8.—For Enlarging National Schools. Mr. J. W. Grundy, Architect, Brogden Street, Ulverston.

WALLSEND.—For Building Two Villas. Mr. J. Angus, 55 North View, Heaton, Newcastle-on-Tyne.

WANSTEAD.—March 17.—For Additions to Caen Hall Lane Schools. Mr. J. T. Bressey, Architect, 70 and 71 Bishopsgate Street Within, E.C.

WEST BROMWICH.—March 10.—For Building Board Schools at Black Lake, for 1,060 children. Mr. E. Pincher, Architect, 274 High Street, West Bromwich.

WIGAN.—March 7.—For Building Business Premises. Messrs. Scott & Verity, Architects, Clarence Chambers, Wigan.

YEovil.—March 25.—For Erection of Public Baths. Mr. J. Johnson, Architect, 9 Queen Victoria Street, E.C.

YSTRADYFODWG.—March 2.—For Extension of Tylorstown School. Mr. J. Rees, Architect, Pentre, Pontypridd.

### TENDERS.

#### BELEFAST.

For Building House and Premises, Antrim Road, Belfast, for Mr. Patrick Leonard. Mr. G. J. BYRNE, Architect, Belfast.

McLrean . . . . .	£950 0 0
Fulton . . . . .	530 0 0
Kerr . . . . .	927 0 0
Campbell & Lorny . . . . .	920 0 0
Kidd . . . . .	907 0 0
Murdoch . . . . .	837 0 0
Collin . . . . .	810 0 0
ROONEY & MOONEY (accepted) . . . . .	755 0 0
Macaulay . . . . .	696 0 0

All of Belfast.

#### BRISTOL.

For Alterations, Repairs, and Rebuilding Party Wall at No. 1 St. Stephen Street, Bristol, for Mr. Fredk. W. Sinnock. Messrs. J. W. TREW & SONS, Architects, Broad Street, Bristol.

	Repairs.	Party Wall.
Higman . . . . .	£954 0 0	£151 0 0
Gay . . . . .	700 0 0	150 0 0
Cowlin . . . . .	675 0 0	190 0 0
Johnson . . . . .	670 0 0	113 0 0
T. & E. Hatherley . . . . .	647 0 0	147 0 0
Bastow . . . . .	630 0 0	115 0 0
JAMES (accepted) . . . . .	489 0 0	—

#### GRAVESEND.

For the Erection of a Pair of Villas, Parrock Road, Gravesend, for Messrs. T. G. & G. Sandford. Mr. EDMUND J. BENNETT, Architect, Gravesend.

ARCHER (accepted) . . . . .	£1,054 0 0
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AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a **Semi-Vitreous** nature, will maintain a clean and washable surface.

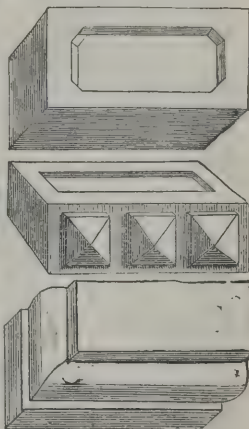
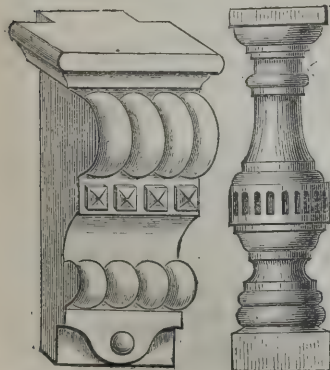
## FACING BRICKS AND BRICK ORNAMENT OF TRUE TERRA-COTTA, AS ALSO ARCHITECTURAL WORK, IN WHITE AND WARM-TINTED BUFF.

Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c.

Samples free to Architects and Engineers.





**BANBURY.**

For Erection of Warehouse, adjoining Steam Flour Mill, for the Banbury Co-operative Society.		
Kingerlee, Banbury	£360	0 0
Grant, Banbury	358	10 0
Page, Banbury	353	0 0
Claridge, Banbury	345	0 0
Hobley & Bennett, Banbury	340	0 0
Bullock, Wellington, Salop	294	10 0
BAILEY, Leamington (accepted)	289	0 0

**BLYTH.**

For Erection of the Thomas Knight Memorial Hospital, Blyth. Mr. J. HOGG, Architect, 4 St. Mary's Place, Newcastle-on-Tyne.

Accepted Provisionally.

J. & W. Simpson, builder	£1,594	0 0
Bell & Co., plumber	110	0 0
Purdy, slater	51	6 0
Innes, painter and glazier	49	6 0

Total . . . £1,804 12 0

**BOULTHAM.**

For the Erection of an Engine-house and Boiler-house at the Waterworks at Boultham. Mr. TEAGUE, Engineer.

Cowen & Lansdown	£2,448	0 0
J. B. Harrison	2,348	0 0
S. & R. Horton	2,304	0 0
H. S. & W. Close	2,294	0 0
J. M. Harrison	2,246	0 0
Crosby & Sons	2,219	0 0
WRIGHT (accepted)	2,065	0 0

**BURSLEM.**

For Building Church at Porthill, near Burslem. Mr. A. R. WOOD, Architect. Quantities by the Architect.

Bradney & Co., Wolverhampton	£5,270	0 0
Gallimore, Newcastle	4,964	0 0
Grosvenor, Tunstall	4,949	0 0
Inskip, Longton	4,535	0 0
Webb, Silverdale	4,500	0 0
Collis, Longton	4,411	0 0
YORKE, Tunstall (accepted provisionally)	4,389	0 0

**CHIPPING WARDEN.**

For Erection of Chapel and School, Chipping Warden.

Watson & Golby, Napton	£714	19 0
Smith, Cropredy	695	0 0
Hobley & Bennett, Banbury	675	0 0
Horseman, Oxford	670	0 0
Bailey, Leamington	638	0 0
Cotterill, Culworth	615	0 0
Kimberley, Banbury	600	9 0
Lambert Bros., Cropredy	586	10 0
Grant, Banbury	545	0 0
CHERRY & PAGE, Banbury (accepted)	535	0 0

**ELTON.**

For Construction of Covered Tar Tank at the Bury Gasworks, Elton. Mr. J. CARTWRIGHT, Borough Surveyor.

France, Stalybridge	£1,721	11 1
Dawson, Bury	1,508	0 0
Byrom, Bury	1,462	10 2
Dennis, Bury	1,346	12 2
Comfort, Bury	1,328	0 0
NEWHOUSE & WRIGLEY, Bury (accepted)	1,261	18 8

**ENFIELD.**

For new Schools at Enfield for the Guardians of Edmonton Union. Mr. T. E. KNIGHTLEY, Architect.  
Through an irregularity in the delivery, the Tender of Messrs. Howell & Son was not discovered till a formal resolution had been passed accepting Mr. Wall's offer; and as he had done work before for the Board, and given satisfaction, they refused to reconsider their decision. The list of Tenders for this work will be found in *The Architect* of February 23.

**HOVE.**

For Alterations and Additions to St. Catherine's Lodge, Hove, Brighton. Mr. WM. FLOCKHART (Messrs. Wallace & Flockhart) 27A Old Bond Street, Architect. Quantities by Mr. Frederick Thomson, London.

	Main Estimate.	Extra for Alterations to fronts.	Extra for Wainscot.	Deduction if for Conservatory in deal.
Goddard & Sons, Farnham	£1,437	0 0		
Kempe, Brighton	4,197	0 0		
Ancombe, Brighton	3,836	0 0		
Howard & Co., Brighton	3,674	0 0		
Parsons & Sons, Hove	3,645	11 10		
Dowsing & Sons, London	3,370	9 0		
Light & Co., Portsmouth	3,198	0 0		
Peters, Horsham	3,100	0 0		
Toms, London	3,043	0 0		
Taylor, Brighton	3,026	0 0		
Webber & Sons, Hove	2,987	0 0		
Reynolds, Hove	2,937	0 0		
Robertson, London	2,813	0 0		

	Extra for Alterations to fronts.	Extra for Wainscot.	Deduction if for Conservatory in deal.
Goddard & Sons	£110	£155	£52
Kempe	136	310	70
Ancombe	112	274	35
Howard	163	78	80
Parsons & Sons	132	154	54
Dowsing & Sons	—	90	—
Light & Co.	112	185	53
Peters	84	98	48
Jones	106	141	52
Taylor	98	159	43
Webber & Sons	100	127	55
Reynolds	94	97	100
Robertson	161	163	92

**HOVE—continued.**

For Connecting Sewers and Flushing Tanks at Hove. Mr. ELLICE-CLARK, Engineer.		
Ancombe, Brighton	£4,872	0 0
Bottrill, London	4,601	0 0
Dearle, Hastings	4,401	0 0
Marshall, Brighton	4,330	0 0
Hill & Co., Gosport	4,116	0 0
Cowdery	4,056	0 0
Peters, Horsham	4,045	0 0
Cheesman & Co., Brighton	3,840	0 0
Etheridge, Croydon	3,804	0 0
Reynolds, jun., Hove	3,497	0 0
Longley, Crawley	3,272	0 0
PARSONS, Hove (accepted)	3,107	0 0

For Sea Defence Works at Hove, Brighton.

Budden & Co., Gloucester	£38,639	12 7
Webster, London	33,723	0 0
Harrison, Brighton	30,966	0 0
Chappell, Pimlico	29,861	0 0
Dickenson, London	27,315	0 0
Doherly, Dublin	27,261	0 0
McCrea & McFarlane, Belfast	26,659	12 7
Lawson, Glasgow	26,272	4 10
Cheesman & Co., Brighton	25,904	0 0
Lee & Sons, Westminster	25,720	0 0
Marshall, Brighton	25,671	4 4
Longley, Crawley	25,189	0 0
HILL & Co., Gosport (accepted)	23,946	0 0
Taylor & Sharp, London	23,000	0 0
Hill Brothers, Wycombe	20,948	11 4

**IRBY.**

For Building Wesleyan Chapel at Irby. Mr. W. A. GELDER, Architect, Hull.

Towl, Caistor	£357	10 0
Emerson, Grimsby	327	0 0
Leaming, Grimsby	312	10 0
Smith, Irby	303	3 6
Snowden, Grimsby	303	0 0
Allison, Lacey	300	0 0
Topham, Grimsby	299	0 0
Oglesby, Killingholme	298	10 0
J. & J. Guy, Grimsby	298	0 0
Kendall, Market Rasen	294	19 0
Fletcher, Cleethorpes	289	11 0
Thompson & Sons, Louth	250	0 0

**LLANSAMLET.**

For Building Board School, Penril Green, Llansamlet. Mr. REES LLEWELLYN, Architect.

J. & D. Roper	£1,892	0 0
Howell	1,847	0 0
Rees	1,754	0 0
Thomas	1,630	0 0
GEORGE (accepted)	1,442	0 0

**LONDON.**

For the Erection of Norfolk Chambers on the Victoria Embankment and Norfolk Street, Strand, for the Law Land Company. Mr. J. DUNN, Architect. Messrs. Nixon & Raven, Surveyors.

Boyce	£27,990	0 0
Mowlem & Co.	26,750	0 0
Patman & Fotheringham	25,943	0 0
Patrick & Sons	25,940	0 0
Bywaters	25,463	0 0
Holland & Hannen	25,272	0 0
Ashby & Horner	25,100	0 0
Conger	25,027	0 0
Chappell	24,900	0 0
Morter	24,567	0 0
Brass	23,993	0 0

For Alterations and Additions to Infirmary and Laundry at School in Bancroft Road, for the Guardians of Mile End Old Town. Mr. J. M. KNIGHT, Architect. Quantities by Messrs. Stoner & Sons, Blomfield Street.

Thompson & Tweed	£1,966	0 0
Perry & Co.	1,758	0 0
W. & F. Croaker	1,739	0 0
Palmer & Sons	1,695	0 0
Wall Bros.	1,684	0 0
Hankins	1,666	0 0
Watson	1,645	0 0
Gentry	1,640	0 0
Hunt	1,573	0 0
Pyle	1,530	0 0
Jo elyn	1,528	0 0
Russell	1,519	0 0
Parfett	1,519	0 0
Buckell	1,495	0 0
Wood	1,483	0 0
England & Thompson	1,476	0 0
HEARLE & SON (accepted)	1,418	0 0

For Building Detached Villa, North Finchley. Mr. FREDK. DENZIL THOMSON, Architect. Quantities supplied.

Van Camp	£1,750	0 0
Webb & Rosser	1,630	0 0
Woodhall	1,575	0 0
Elliott & Beale	1,548	0 0
Marriott Bros.	1,546	0 0
Staines & Son	1,444	0 0
Beach (too late)	1,435	0 0
Evans	1,385	0 0
D. D. & A. Brown (too late)	1,350	0 0
Russell	1,320	0 0
Thrum	1,300	0 0
Stillwell & Ely	1,296	0 0
Sheppard	1,290	0 0
Dixon	1,191	0 0

For School-keeper's House, Covered Playground, Lavatories, and Water-closets, Galleway Road Board School.

Atherton & Latta	£2,110	0 0
Pritchard	1,734	0 0
Roy	1,700	0 0
Jerrard	1,679	0 0

For Covered Playground, Basnett Grove Board School.

Cox	£325	0 0
Ewart & Son	320	0 0
Riley Bros.	266	0 0

**LONDON—continued.**

For Partitions, Blomfield Road Board School.		
Tongue	290	0 0
Johnson	229	0 0
For Additional Warming, High Street Board School, Stoke Newington.		
Shurmur	£167	0 0
Boyce	155	0 0
McCormick & Sons	135	0 0

For Building Board School, Princess Terrace, Mr. E. R. RONSON, Architect.

Bissett & Son	£13,540	0 0
Patman & Fotheringham	11,489	0 0
Larter & Son	11,222	0 0
Manley	11,113	0 0
Goodman	10,987	0 0
Kirk & Randall	10,826	0 0
Scrivener	10,818	0 0
Smith & Sons	10,683	0 0
Stimpson & Co.	10,600	0 0
Jerrard	10,589	0 0
Howell & Son	10,490	0 0
Brass	10,041	0 0
Niblett	9,974	0 0
Jackson & Todd	9,764	0 0
Grover	9,715	0 0
Wall Bros.	9,648	0 0

For Enlargement of Board School, Webb Street, Bermondsey. Mr. E. R. RONSON, Architect.

Falkner	£4,313	0 0
F. & F. J. Wood	4,193	0 0
Hart	4,072	0 0
Staines & Son	3,996	0 0
Johnson	826	0 0
Tongue	803	0 0
Patman & Fotheringham	789	0 0
Kirk & Randall	750	0 0
Brass	735	0 0
Bangs & Co.	730	0 0
Turtle & Appleton	728	0 0
Niblett	718	0 0
Smith & Sons	707	0 0
Shurmur	694	0 0
Jerrard	690	0 0
Holloway	677	0 0
Atherton & Latta	650	0 0
Scrivener & Co.	644	0 0
Lathey Bros.	634	0 0
Grover	626	0 0
Jackson & Todd	620	0 0
Downs	620	0 0
Shepherd	598	0 0
Wall Bros.	587	0 0
Stimpson & Co.	480	0 0
Howell & Son	462	0 0

**MULLINGAR.**

For Renewing Floor of Male Refectory, Mullingar Lunatic Asylum.

Morris, Sligo	£255	0 0
Donnelly, Dublin	247	0 0
Wardrop, Dublin	246	6 0
Kelly, Longford	215	0 0
Scott, Mullingar	194	0 0
WILLIS, Mullingar (accepted)	146	0 0

**NEWARK.**

For Building Unitarian Chapel, Newark. Mr. GEORGE SHEPPARD, Architect.

Cosham	£1,180	0 0
Henderson	1,145	0 0
Mackenzie & Sons	1,141	0 0
Thrall & Sons	1,080	0 0
Lane	1,025	0 0
Smith & Lunn	997	0 0
Brown & Son	990	0 0
Duke	985	0 0

**PORTREE.**

For Episcopal Church, Portree, Skye. Mr. ALEXANDER ROSS, Architect, Inverness.

Total amount of Estimates, £1,800.

**RAMSGATE.**

For the Erection of a Cottage, at the back of No. 3 Paragon, Ramsgate, for Mr. W. H. DUNN, Mr. E. L. ELGAR, Architect, Ramsgate.

J. Newby	£567	9 0
Newby Bros.	489	0 0
Port	480	0 0
Cowell	475	0 0
BOWMAN (accepted)	424	0 0
Miller	405	0 0

**RASTRICK.**

For the Erection of a Villa Residence in Huddersfield Road, Rastrick, for Mr. R. F. ROGERSON. Mr. E. F. ROGERSON, Architect, Brighouse.

Masons.

Cross, Brighouse.

FEARNLEY, Brighouse (accepted).

John Bottomley, Brighouse.

Tom Bottomley, Brighouse.

Crossley, Hove Edge, near Brighouse.

Crowther, Rastrick, near Brighouse.

Joiners.

Bottomley, Rastrick, near Brighouse.

CROWTHER, Brighouse (accepted).

Halliwell, Brighouse.

Wadsworth, Southowram, near Halifax.

Plasterers.

Anderson & Hoynes, Brighouse.

GLEDHILL & BARRACLOUGH, Brighouse (accepted).

Heponstall, Brighouse.

Cordingley & Son, Bradford.

Painters.

Hirst & Barraclough, Brighouse.

Plumbers.

LAWSON, Brighouse (accepted).

Slaters.

SMITHIES, Bradford (accepted).



REIGATE.

For New Wesleyan Chapel and Schools, Reigate. Mr. F. BOREHAM, Architect. Quantities by Mr. C. W. Brooks.

Sawyer	£3,553	0	0
Roberts Bros.	3,497	0	0
Taylor Bros.	3,488	0	0
Dove Bros.	3,475	0	0
Buckland	3,452	0	0
Holt	3,250	0	0
Redford & Potter	3,100	0	0
Woodward	3,050	0	0
Apted Bros.	2,949	0	0
Holloway	2,860	0	0
NIGHTINGALE BROS. (accepted)	2,808	0	0

RHAYADER.

For Additions, Cefnefs, Rhayader, Radnorshire. Mr. S. W. WILLIAMS, County Surveyor, Architect.

Hamer, Rhayader	£497	14	0
Davies, Hereford	468	0	0
Williams, Knighton	467	7	0
TREASURE & SON (accepted)	463	0	0
Evans, Rhayader	459	0	0
Bowers & Co., Hereford	449	0	0
Dore, Rhayader	425	0	0
Davies, Newtown	376	0	0

THURSO.

For Building an Episcopal Church, Thurso. Mr. ALEXANDER ROSS, Architect, Inverness. Quantities by Mr. C. A. Hendery, Surveyor, Inverness.

Bain, mason	£583	18	3
McKay & Swanson, carpenter	448	9	6
Reid, slater	70	17	3
Dorell, plumber	63	11	7
McKay & Swanson, plasterer	21	13	0

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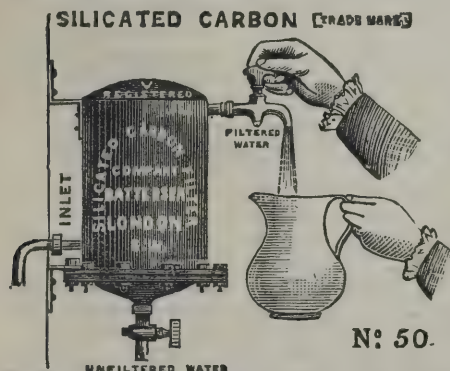
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Miller & Son, Clapham	1,994	0	0
Dudley, Lower Merton	1,790	0	0
Harvey, Brentford	1,750	4	7
Strachan, Wood Green	1,715	0	0
Nowell & Robson, Kensington	1,697	0	0
Aldred, Hammersmith	1,678	0	0
Toomes & Wimpey, Hammersmith	1,517	0	0
Sims, Richmond	1,492	0	0
Smoker & Co., Chiswick	1,443	15	0
Salmon & Co., Westbourne Park	1,412	0	0
Nicholson, Brentwood	1,373	3	0
Crook & Smith, York Town	1,350	0	0
S. & J. Saunders, Fulham	1,317	0	0
FORD & EVERETT, Kennington Road (ac- cepted)	1,250	0	0
Potter, Lower Clapton	1,175	0	0

SCARBOROUGH.

For Erection of Business Premises, Newborough Street,  
Scarborough, for Messrs. Geo. Dale Smith & Son. Mr.  
JAMES WILSON, Architect, 12 East Parade, Leeds.

Accepted Tenders.

Bastiman, excavator and mason.  
Fell, joiner.  
Pullan, slater.  
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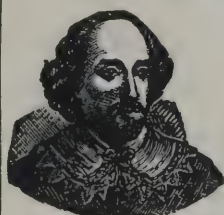
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JOHN CLARK, Architect. Quantities by the Architect.

Fishburn	£2,611	0	0
Waterman	2,600	0	0
Rodley & Sons	2,400	0	0
Carr	2,295	0	0
Seiles	2,252	6	6
Ashforth	2,240	0	0
Foxton Bros.	2,222	10	0
Sharp & Son	2,188	0	0
W. & A. FORSDIKE (accepted)	2,175	10	0
Eyre	2,120	0	0

STOCKTON.

For Building Board Schools, South Stockton, to accom-  
modate 1,000 Children. Mr. HENRY WEATHERILL,  
Architect, 59 High Street, Stockton-on-Tees. Quantities  
by the Architect.

Lee & Jones, South Stockton	£6,850	8	6
Schofield, Dewsbury	6,279	17	8
Davison, Stockton	6,792	8	0
Wilkinson, Middlesbrough	6,675	0	0
W. & R. Sturdy, Middlesbrough	5,475	0	0
Lazonby, Stockton	5,458	0	0
Johnson, Middlesbrough	5,450	0	0
W. & R. Blackett, Bishop Auckland	5,435	0	0
Atkinson, Middlesbrough	5,273	0	8
W. & H. Henderson, South Stockton	5,235	17	9
Dickinson, Saltburn	5,191	3	4
Perks, Stockton	5,033	0	0
CUTHBERT, South Stockton (accepted)	4,674	6	3

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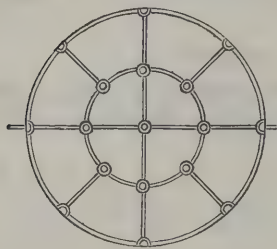
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**PATENT WROUGHT-IRON SASHES AND WROUGHT BOSSES**

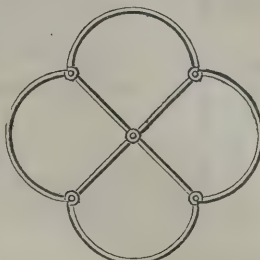
SPECIALLY ADAPTED FOR WAREHOUSES, SCHOOLS, AND PUBLIC BUILDINGS.



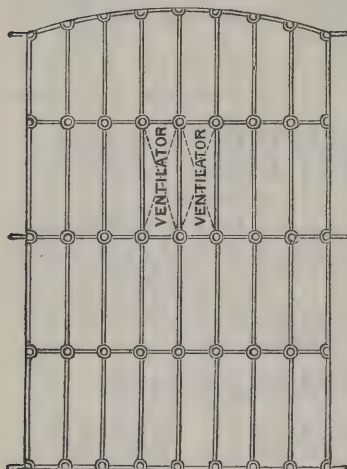
CABLE LIGHT

The Patentee begs to call particular attention to the great strength of this construction. The Bars and Bosses, being of malleable wrought iron, form an exceedingly firm joint at the intersection of bars. They are durable, and of light appearance, the Bosses being small and not unsightly. They can be made at very short notice, and at the price of an ordinary cast iron sash.

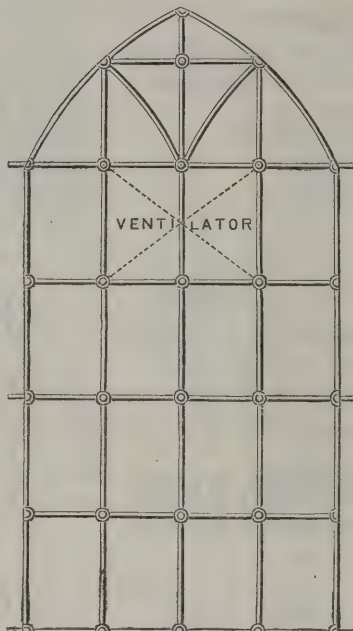
PRICES UPON APPLICATION.



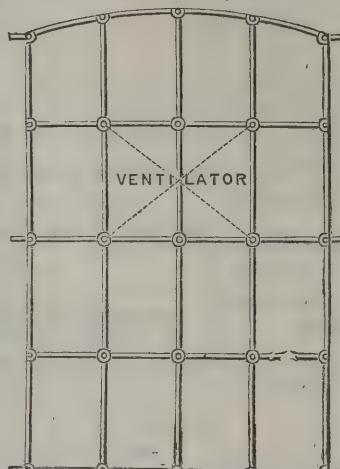
CABLE LIGHT.



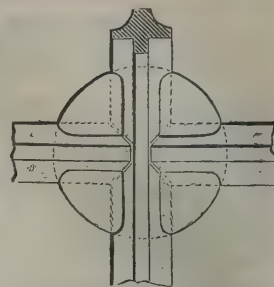
CLOSE BAR SASH (obviating use of Window Guards.)



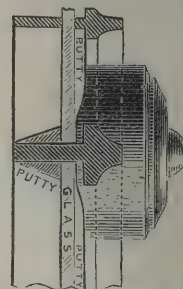
ORDINARY WAREHOUSE AND SCHOOL SASHES.



VENTILATOR

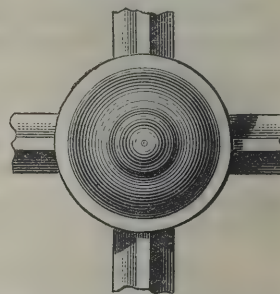


Back view of Boss, full size.

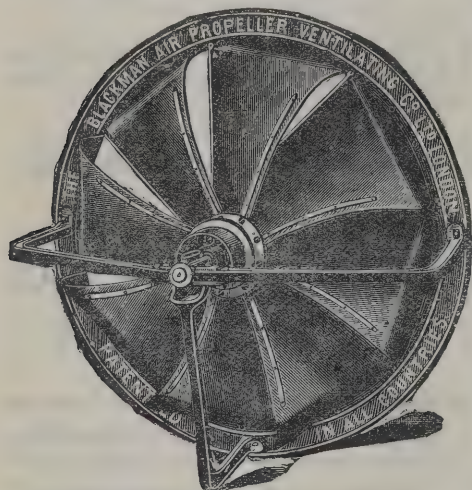


Section through Boss, full size.

These can be glazed flat, like ordinary wooden sashes, without the corners of the panes being chipped off.



Front view of Boss, full size. Obscuring no appreciable light.

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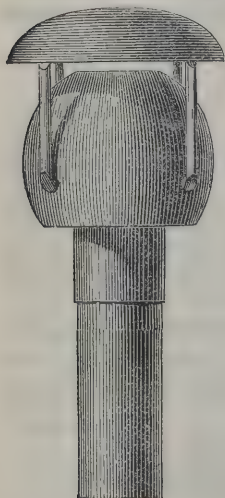
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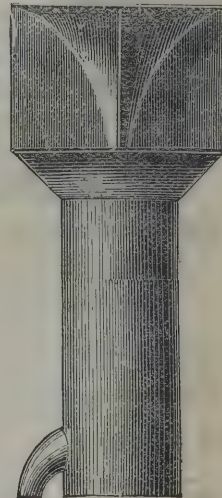
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# The Architect.

## MEDALS AND PRIZES AT THE INSTITUTE.



ENGLISH institutions, as all of us know, are everywhere moving with the times, some more decidedly, some less; and amongst the rest the Institute of Architects ought to be moving. We see, for instance, the clerks of works publishing a periodical. We see the Association of district surveyors assuming an attitude of energy, appointing a President, Vice-President, and large Committee to indicate its resolve to serve the general interests of building progress by the practice of corporate activity. We may

perhaps all the more expect and hope therefore to see the Institute, in the present somewhat critical position of all things architectural, preparing in one way or another for the inevitable pressure which modern vitality is everywhere occasioning. And such, we think, is really the case; for the meeting of last Monday, although scantily attended owing to the bad weather, was singularly characterised by a display on the part of the members at large of that personal earnestness in business which is the lifeblood of a guild, and which has been rather kept in check during the last few years by a peculiar course of treatment, under the direction of certain doctors whose intentions, to give them their due, may have been on a higher level than their skill.

It is to be regretted very much that the gold medal of the late Mr. GRISSELL—a builder's prize for building science—has this year attracted not a single competitor. We cannot help, indeed, making this a matter of distinct complaint against our rising men of the junior class. If their artistic ambition is, as many say, a good deal overdone just now, their scientific knowledge most certainly is not; and we do not hesitate to say that, of all the prizes at the disposal of the Institute of Architects, that which is meant to be so handsome a reward for the cultivation of constructive science might at the present moment perhaps be made of more practical advantage to a judicious beginner in business than any other on the list. Not only so, but inasmuch as the members have shown so laudable a readiness to supplement this prize (as also others) by means of a second and even a third acknowledgment of merit, so much the more may we recommend our young men to take up the subject with a serious determination to do justice to it, and to themselves.

For the prize endowed by the late Sir WILLIAM TITE there were, as is not always the case, several good designs submitted; and everyone will be ready to congratulate the winner, Mr. POLEY—who is one of the new Associates by examination—upon his success. None the less, however, may we congratulate Mr. CAMPBELL, of Glasgow, upon the award to him of the second reward of an Institute medal, and especially upon the stout fight which was made on his behalf—or rather on behalf of his work—for a money addition, in recognition of merit which had only lost the first place before the committee of private adjudicators by a very close vote. He may possibly be amused, also, and edified when he comes to know that this generous proposal, by some strange twist of temper, came to be the cause of what we take leave to hope may be the final struggle between the spirit of independence in the body of the Society and the incomprehensible self-assertion of the little knot of compensation surveyors and competition adjudicators who have recently been able to assume a position of arbitrary authority as the representatives of “order,” not only as Heaven's first law, but much more as King WILLIAM the Fourth's, it being proclaimed, as they say, once for all in the charter granted by that nautical monarch, that (although Britons never, never must be slaves) “British architects” never must be anything else. The sitting President was, in short, led to signify his personal opinion upon this outrageous doctrine with such characteristic warmth as to bring down upon the chair, for the first time in the history of the Institute, the express rebuke and defiance of the meeting. It was the Sedan of the “new system”; and perhaps Mr. CAMPBELL had the benefit of this in the unanimous award of his well-earned gift

of money. At any rate, it becomes all the more important that, in the election of a new President and Council now coming on, all members of the Institute who value the true dignity of their guild should be a little more on the alert than they have been. As Sir WILLIAM HARCOURT in his forcible way pointed out the other day, in connection with another matter of annual appointment, English electors have themselves to blame if they do not make their act of election the reality which it is by law intended to be.

The SOANE medallion, with its 50*l.* for travelling money, was won by Mr. HARRIS, of Bolton-le-Moor, by means of a highly creditable set of drawings; and a second prize was awarded in the shape of a medal of merit to Mr. CRESWELL, whose address is in London. In this competition also the question was raised whether a third prize might not be bestowed upon the author of a design which was of striking character. The claim, however, was not successful. The subject happened to be a “Theological College,” and this design was in a Classic style. In the opinion of one of the members present—not himself, by the way, a “Gothic man”—this circumstance placed it *hors de concours*; as if theology could not be rightly acquired except amidst the quaint features—and grotesque ornaments, perhaps—of mediæval fancy. This argument, however, although not resented by the critical common sense of the meeting as it might have been, was at least not further alluded to; for indeed the drawings—one might almost take a wager they came from the city of “Greek Thomson”—had demerits much less visionary in their nature. In a word, the perspective view was rendered in the vehement manner of Mr. BERESFORD PITE, and the meeting resolved that there had been enough of this. Mr. PITE, it will be remembered—it will not be forgotten for a long time—produced in a recent competition for this same prize a “West End Clubhouse” of such strange device as to involve a whole catastrophe of taste, and with this production, in spite of protest, he actually won—we cannot say in a canter, but rampant—kicking, as it were, all other West End clubhouses into the limbo of the too-utterly commonplace. Perhaps it was excusable, if no more, in view of the success of this powerful piece of work on a former occasion, that another young gentleman should make an adventure in the same vigorous direction with a hope of the same satisfactory result; but at all events the certificate of merit was flatly refused—and we cannot so far regret it—although, no doubt, the author is left to congratulate himself upon having made his work the subject of an earnest debate, in which no speaker could deny that he was deserving of commendation. After this, wolfish draughtsmanship is not to be encouraged.

No less than five acknowledgments were cordially awarded to those sets of measured drawings, all of churches this year, which almost always seem to be so particularly well done as to constitute in one sense the most valuable of the competition works of the Institute. Mr. ANDERSON of Kensington, Mr. WILSON of Manchester, Mr. SUTTON of King's Lynn, Mr. MITCHELL of Clapton, and Mr. DOWNES of Hull, all deserve the utmost praise. A proposal was debated for publishing such productions as these in the Institute Transactions, and perhaps all parties might be much benefited if it could be carried out.

Four essays had to be dealt with on the subject of “Staircases,” and Mr. MARWICK of Edinburgh, an Ashpitel prizeman, carried off the medal. One other essay at least seemed to be very creditable to its author. It may be explained that the chief merit of these dissertations lay in the collections of sketches, engravings, and photographs by which they were copiously illustrated.

It can scarcely escape notice that the majority of the prizemen above catalogued are persons resident in provincial towns—six of them, indeed, as compared with four Londoners. Although the test is obviously not conclusive, we regard this as affording valuable evidence of the spread of advanced architectural skill all over the country. As we have often had occasion to say, the ascendancy of the metropolis in architectural practice, and in artistic taste particularly, is now a thing of the past. London is still a kingdom in itself, architecturally as otherwise, and it is the head-quarters also of English architecture as of all else; but the “country architect” is no longer the mere country cousin of the “London architect,” awkward and shy. He “runs up to town” any day, and sees all and knows all that “town” can offer him; his education is the same education, and his work the same work; and if the question were pressed upon us whether in some instances



his quiet surroundings in a cathedral close or a rustic lane, instead of a London street, may not be more rather than less conducive to the cultivation of artistic grace, we should hesitate very decidedly to answer in the negative.

### ARTISTS AND PATRONS.

IF the sarcastic article by M. DARGENTY which appears in the last number of the *Courrier de l'Art* is to be taken as an indication of public opinion in Paris, we may assume that in the MEISSONIER-MACKAY affair the painter has made a *faux pas*—and in France that kind of mistake is rarely forgotten. M. DARGENTY says he has had his information from a friend who, while fully cognisant of all the circumstances, is entirely unbiassed; and, unless there is an error in the account, it is difficult to avoid the conclusion that the American millionaire has not been mercifully treated. The story, of which so many versions have been repeated, would seem to be as follows. About two years ago Mr. MACKAY was asked by one of his countrymen to accompany him to M. MEISSONIER'S studio in order to see a portrait of Governor STAMFORD. The artist and Mr. MACKAY were not strangers to one another, and the latter naturally expressed his admiration of the latest among the painter's works. Whereupon he was surprised to hear M. MEISSONIER declare that his best work would be found in a portrait of Mrs. MACKAY, if ever he were allowed to paint one, as it was a subject which he greatly desired. The painter's own words were more fervid and characteristic:—"Je désirerais vivement faire le portrait de Mme. MACKAY; je suis certain que j'en tirerais le plus beau morceau de mon œuvre, la perle de mon écrin." A proposal of this kind may not be unknown among struggling artists, but artists in M. MEISSONIER'S position should not seek commissions so plainly. It is possible that Mr. MACKAY'S first thought was the enormous cost of so interesting an experiment, for he was not elated, and merely promised to talk over the matter with his wife. What woman, and especially an American woman, would hesitate when she heard that a famous artist like M. MEISSONIER was ambitious to give immortality to her appearance? Mrs. MACKAY consented; and we assume that there was a good deal of speculation that night in the costly house near the Champs-Élysées about the kind of picture that the artist contemplated. One thing was certain, that it was not to be a mere portrait, like the hundreds that are to be seen every year in French and American exhibitions, but a picture. In the immortal historical picture of the PRIMROSE family the Vicar's wife was represented as VENUS, and the Vicar in his gown and band was seen presenting her with his tracts on the Whistonian monogamist controversy; but although Mr. MACKAY was to have the privilege of paying for the picture, it was never supposed that he was to be depicted. The canvas was to be appropriated to Mrs. MACKAY and whatever accessories the artist might select. M. MEISSONIER was duly informed of the resolve of the family council, and he repeated that it was his intention to produce a *chef-d'œuvre*. Not a word was said about cost. Both parties were eager for the masterpiece to be commenced. The summer holidays were approaching, and it might have been foreseen that neither Mrs. MACKAY nor M. MEISSONIER could be expected to remain in Paris. But a few sittings were given, and then operations were suspended on the understanding that the work was to be resumed when Paris again became habitable. When everybody had returned to town Mrs. MACKAY wrote to the painter, in the most polite terms, offering to sit again. There was no reply, and a second letter was also unsuccessful in overcoming the artist's silence. There is nothing unreasonable in the supposition that in the interval M. MEISSONIER would have been able to paint the accessories in the picture, no matter whether they belonged to millinery, furniture, or jewellery, if the originals were left with him; but a portrait could hardly be completed from memory. It was somehow completed, and, to the surprise of Mr. MACKAY and his wife, figured among the works that represented M. MEISSONIER in the Triennial Exhibition of 1883. The portrait did not win applause from Parisian critics. The hands especially were not suggestive of elegance, and it was explained that as Mrs. MACKAY was unable to leave her hands with the other accessories which had been entrusted to the painter, he was compelled to utilise those belonging to a model. A similar plan was adopted by VANDYKE, but he was careful in his selection.

M. MEISSONIER is too great a man to care much for plebeian critics, and, so far as is known, he made no effort to improve the picture after it left the exhibition. One day Mr. MACKAY saw the so-called portrait of his wife arrive at his house, accompanied by a note which was signed "PETIT," requesting payment for it, the amount being 70,000 frs. Large as was the sum it was paid without demur, and Mr. MACKAY kept the transaction to himself, just as a business-man would who had made what he deemed a bad bargain. However, after three months had elapsed the story of the picture got abroad, and of course was much distorted in the relation. It was only on reading one of the journals that Mrs. MACKAY discovered how she was made the cause of a ferment in the art world. The affair gives opportunity to critics like M. DARGENTY—and there are a great many who coincide with his opinions—to dispute the supremacy of M. MEISSONIER. A visit to the Louvre is, it is said, enough to demonstrate that M. MEISSONIER is not on a level with artists such as METZU, TERBURG, JAN STEEN, VAN DER MEER, and others of the Dutch school. His style is said to be characterised by littleness, timidity, dryness, and other defects. M. DARGENTY'S criticism is so freely expressed that the judge and jury who tried the BELT case would be appalled if they read it, and nothing corresponding to it dare be attempted in an English journal. But it may be taken for granted that all the efforts of the critics will never induce M. MEISSONIER to abate his prices or diminish the value of his pictures whenever one finds its way to the Hôtel Drouot.

The position adopted by M. MEISSONIER suggests the relations which now subsist between painters and the public, and which are entirely modern. There was a time when a painter was bound to please his patrons in the same manner that a tailor had to please with a coat, and probably it would be nearer the truth to say that the law in the case of the artist was altogether on the patron's side. This is suggested by GAY'S fable, which once formed the subject of a picture by the late Mr. SOLOMON. A painter, we are told, took the greatest pains to produce good likenesses, and succeeded in doing so; but, in consequence of their accuracy, his pictures were left on his hands, and lay in dusty piles. In despair he set up busts of *Apollo* and *Venus* in his studio, and contrived to use them when he was supposed to be copying the faces of his patrons. Everybody was delighted, and the painter gained fame and fortune through his busts. The moral to be drawn is that people rarely care to appear on canvas as they are, but desire to be shown as endowed with imaginary gifts. Photography has done much towards making men and women be satisfied with accuracy, but there is a lurking belief that a painter's eye should be competent to discern beauties which cannot be reproduced by a lens. Whether M. MEISSONIER'S portrait was what is commonly called a good likeness or the reverse does not seem to be clearly stated; but it is almost incredible to hear that a painter who is so microscopic in his details should fail in accuracy when rendering a lady's face. On the other hand, it must be admitted that portraiture demands special qualities which are not necessarily possessed by every figure-painter; and although M. MEISSONIER has produced a pleasing head which is called *Charlemagne*, he might not succeed so well as M. BONNAT in representing M. GRÉVY.

But what is deserving of note is the acceptance of the work by Mr. MACKAY, although it was not considered satisfactory, and the doubt which has been expressed whether he could legally do otherwise. An artist in M. MEISSONIER'S position risks his reputation by a defective work, and therefore would hesitate before parting with one of that character. It may also be said that a painter is generally a better judge of the merits of a work than the critics, and why should it not be so in this case? At any rate Mr. MACKAY did not care to take his case into a French court, and to pay at once was probably the most economical course.

In England a case of the kind would hardly be decided in favour of the plaintiff, unless the artist's success in portraits was universally acknowledged, for so impalpable a quality as "artistic merit" is beyond the comprehension of a modern jurymen. But if it were a case in which an architect had prepared plans which did not meet the approval of the client, there could be no doubt about the verdict. It is almost impossible to imagine that in this country any architect's claim which resembled M. MEISSONIER'S could be upheld. Mr. MILLAIS might demand—and, if a jury



were in a liberal mood, obtain—a sum for a portrait that was in excess of his customary fee and far beyond the average price of other men. But, unless there was a special agreement, an architect Academician could hardly expect to be awarded for his plans more than  $2\frac{1}{2}$  per cent. on the estimated outlay. The late Mr. BURGESS, it is understood, was sometimes paid 15 per cent.; and the Institute schedule says that in the cases where the expenditure is mainly for skilled labour, and not for materials, the charge should be regulated by special conditions. It is to be feared, however, that unless an agreement in writing could be shown, the Courts would decline to recognise 15 or even 10 per cent. But there is nothing equitable in the arrangements by which an abnormal commission can be paid to a painter, while architects of all degrees of skill are remunerated at an uniform rate, which is altogether inadequate for all but the plainest class of work. Some years ago the painter's position as regards fees nearly corresponded with what the architect's is now; but the absence of restriction has enabled them to obtain very large fees, and the remarkable demand of M. MEISSONIER is but the latest example of freedom in dealing with patrons.

### PARIS NOTES.

THE "oldest inhabitant" fails to remember when the main thoroughfares of Paris were cut and blocked up to the extent they now are. The works in progress are of three kinds, and those being executed in the central part of the city alone furnish employment to nearly eight thousand men. In the Avenue de l'Opéra and on the main boulevards the macadam or granite paving is being taken up, and the new system of creosoted wood pavement laid on a bed of cement substituted for it. At the same time new water-mains are being laid down in the 1st and 2nd Arrondissements, and fire-hydrants established at fixed intervals. Finally, the roadways are cut up on all sides for the execution of a work that could no longer be delayed, viz. the substitution in the asphalt-paved streets of a thick bed of mortar and cement in place of the old lime *béton*. This operation alone will entail an outlay of close on two million francs.

The special Committee on Works of Art (*Comité des travaux d'art*), the appointment of which was announced in last week's *Architect*, has been constituted as follows:—President: M. A. Kaempfen, Director of Fine Arts. Members: MM. R. Ballue, Ph. Burty, G. Lafenestre, Ch. Yriarte, Inspectors of Fine Arts; A. Dayot, Assistant-Inspector; P. Mantz, ex-Director of Fine Arts; A. de Ronchaud, Director of National Museums; Poulin, Inspector of Public Buildings; and Etienne Arago, Conservator of the Luxembourg.

On Saturday last the Académie des Beaux-Arts proceeded to the election of a member, in the section of Architecture, in the place of M. Lesueur, deceased. The six candidates were presented by the examining committee in the following order:—MM. Diet, Daumet, André, Normand, Hénard, and Magne. At the third ballot M. André obtained the requisite absolute majority of votes cast, and was declared elected by 27 against 8 given to M. Daumet, and 1 to M. Diet. The new member gained the Grand Prix de Rome in 1847, is Inspector-General of State Buildings, an officer of the Légion d'Honneur, and has been professor at the School of Fine Arts for over twenty-eight years. He has designed many public buildings, his most notable work being the zoological section of the Natural History Museum.

The ruins of the old Palais de la Cour des Comptes appear doomed to stand indefinitely, silent witnesses to the internecine strife that brought them to their present state. A recent inspection has shown that what remains of the buildings cannot be utilised in any way. Thus the proposals put forth by the Union Centrale des Arts Décoratifs and the Société des Artistes Français respectively, to utilise the ruins in the construction of an art palace have to be abandoned as impracticable. Perhaps the Government will now decide upon taking the only step that appears feasible to bring about the removal of this unsightly memorial of civil war—or in other words, sell the ground for what it will fetch as building sites.

It is proposed to create, at a short distance from Paris, branches of all the great public schools in the capital. For that of the Collège Chaptal—the great commercial school of the city of Paris—several sites have been proposed, and, among others, the historic domain of Malmaison; but the school council have decided that the new buildings must be situated somewhere on the line of the Western Railway, for the convenience alike of the professors and pupils' families. Choice will probably be made of the Villeneuve l'Etang estate, near the Park of St.-Cloud, where a site for buildings covering a space of 2,000 mètres, and capable of accommodating 200 scholars, may be obtained.

A special meeting of the Société Libre des Artistes Français was held on Monday at the Café Hollandais, when over a hundred members attended. After a discussion lasting an hour and a half, it was decided that no programme should be submitted for acceptance to the candidates for the jury of this year's Salon. At the annual general meeting of the society, held during the previous week, a declaration to be subscribed by candidates, and couched in the following terms, had been adopted:—"The undersigned engage to combat with all their might the 1886 Triennial Exhibition, inasmuch as its opening is fixed for May 1 of that year, and will necessarily prevent the Association of French Artists from holding its yearly Salon under the conditions that were formally guaranteed by the State." This declaration has now been abandoned, and the previous vote cancelled. A further meeting will shortly be held to vote the preliminary list of candidates for the jury.

The Department of Public Instruction and Fine Arts is engaged in drawing up for submission to the President of the Republic, a general report on the present condition of the museums and historical buildings of France.

In the competition for the Labarre prize, the architectural jury at the School of Fine Arts have just awarded the first place to M. Risler, a pupil of M. André.

M. Wertheimer, the Viennese painter, who obtained the Medal of Honour at the Amsterdam Exhibition, seems ambitious of following in the footsteps of his fellow-subject, M. Munkacsy. His remarkable picture, *The Syren*, has just been placed on view in a room in the Rue Montmartre.

The Museum of Decorative Art at the Palais de l'Industrie was opened on Saturday, the 1st inst. The most noteworthy object in this year's collection is the monument designed by M. Coutan, the sculptor, for the historic tennis-court at Versailles. This work is better in its details than in general effect; the statuettes round the base of the column, that rises from the centre, are of exquisite workmanship, but must be approached very nearly in order to be appreciated. They are four in number, and represent Bailly, Sieyès, Mirabeau, and Lafayette. Artistic furniture is but feebly represented this year, the best exhibit under this head being a magnificent oak cabinet—German Renaissance of the sixteenth century—presented by M. Dollfus. The exhibits of old china and pottery are very fine. Among the chief collections in this section may be mentioned that of Comté Kleczkowski, an exceedingly rich one, occupying a considerable portion of one of the large rooms; M. Antonin Proust's interesting specimens of Bosnian pottery; the antique terra-cottas and vases lent by MM. Rollin and Feuarent; the choice examples of Sèvres work presented by the Minister of Public Instruction, and some beautiful Limousin porcelain executed by the pupils of the Limoges School of Decorative Art.

A novel feature of the exhibition is a collection of ladies' *coiffures*, all, or nearly all, of the eighteenth century. There are, moreover, many rare books, manuscripts and old illuminations, as well as a room set apart for decorative drawings, besides collections of fans, old Japanese carvings, mosaics, enamels, tapestries, artistic designs for wall-papers, ancient weapons, &c., &c.

The exhibition that is being organised by the Union Centrale des Arts Décoratifs, especially for artistic wood and stonework, will open on August 1 next. Applications from intending exhibitors must be sent in before May 31.



By decree of the Minister of Public Instruction and Fine Arts, M. Thomas, a member of the Académie des Beaux-Arts, has been appointed Professor of Sculpture and head of an *atelier* at the National School of Fine Arts, in place of M. Dumont, deceased.

Important works, which are estimated to cost 15,000,000 frs., are about to be commenced on the Saint-Denis Canal and the Villette Dock, which will thus be closed to navigation for some time. Both the canal and dock are to be deepened and the former widened in parts, in order that boats of much greater tonnage may enter the city.

### GLASGOW INSTITUTE OF ARCHITECTS.

THE annual dinner of the Glasgow Institute took place in the St. Enoch Hotel, on Friday, in last week. Mr. James Thomson, F.R.I.B.A., president, was chairman, and Mr. David Thomson, F.R.I.B.A., vice-president, croupier. Among the guests present were Mr. Arthur Cates and Mr. J. Macvicar Anderson. The President, in proposing the toast of the evening, "The Glasgow Institute of Architects," said:—"We have been having prominently before us of late a book called 'Progress and Poverty,' but I think I may safely say that so far as general business connected with our profession is concerned the only progress we have made has been towards poverty; for, alas! the crisis of 1878 still leaves its dregs behind, and the consequence has been a very decided lull in all building and improvements. But your council has not been idle; it has had various matters before it. The consideration of the Health Bill and the Building Act has led me to look somewhat into those matters now so prominently before the public, and well known to the country as the 'Housing of the Poor' and the 'Bitter Cry of Outcast London.' The poor we shall have with us always, and I think no one knows that fact better than the Glasgow ratepayer. Since the machinery of the Improvement Act for the city of Glasgow in 1866 was set in motion, exposing the close, pestilential nests of misery and crime, the citizens saw additional evidence of the necessity for a change in the housing of the poor. But those who have known Glasgow for the last thirty or forty years, as I am sure the men did who urged on the Improvement Scheme, required no education from the modern speeches or pamphlets to show the horrible state of some of our lanes and closes in Glasgow; and I am not sure but much more strongly-coloured pictures could have been drawn of the horrible squalor, wretchedness, and crime in our Black Boy Close, Havannah, and the Fiddler's Close in High Street. Although the 'closes' I have named are now gone it is much to be feared that the evil is but partially removed—in many instances removed from one place to another, only to break out again with greater violence it may be on account of its being in a new place. These considerations have been forced upon us in connection with the new Building Act, for we all know that unless the people who are to inhabit the better kind of dwellings which we aim at for artisans and the poor are educated and made better, good and improved houses will be thrown away upon them. We know that the workman likes to have his house near his work; and it appears to be great nonsense talking about suburban cottages and cheap railway trains for the special accommodation of workmen to and from their work. The great difficulty, however, is not with the workmen, and the houses suitable for them; it is with those whose earnings are uncertain, and whose occupations are not to be found in the 'Directory.' Their rent payment is uncertain, but they must be housed. There are different grades of these also—one with fairly honest intentions, if these can be carried out; another with no intention at all but to prey upon his neighbour and steal. I would not like just now to draw out a plan and specification for the sort of home I should recommend for the 'abject poor' of Glasgow, but would leave the matter in your hands for due consideration. Whatever we may have to say of the quiet and gloom of the present time, we can fall back upon the time not long ago when property round about us rose in the market to an almost fabulous extent. I think it is now about time to lay our grumbling aside and look forward to what is to come. You will remember one notable instance in connection with the rise of property in our town which of itself is enough to rouse us up whenever it is named, and it has been often quoted—I mean Yorkhill, an estate of 104 acres, which was bought in 1823 for 19,000*l.* This property is not all realised yet, but 44 acres of it has already brought 220,000*l.*, so that a moderate calculation for the whole is given at 600,000*l.* This is but an instance of the rise in one locality in Glasgow, but it furnishes an illustration of the great progress which has been made, although some districts have not risen to the same extent, and I think I see the indication of a halt in the long-continued depression which will cause all who are interested to look about for the symptoms. At present we are working at the beginning of railways under our city, like London when it began its underground railway twenty-three years ago; and who knows where it may stop? At present the system which is being wrought

out is only from College Station to Stobcross Station, but when that is finished I think the necessity will be seen for more lines and junctions. This probable increase of work and provision for future work around us brings me to a point of our history which is very peculiar. It is exactly fifty years since Telford, the engineer, erected Glasgow Bridge. At that time the city was very different in dimensions from what it is now, and, remember, the growth has not been confined to one point, but has spread and increased until on the north side of the city it has touched Partick and Tollcross, and on the south side of the river it has extended itself from Govan to Rutherglen. Yet Broomielaw remains where it was fifty years ago, and while the harbour has been extended miles down the Clyde, the Glasgow Bridge, at the Broomielaw, is the westmost bridge still. It is extraordinary to think that, with all the development of Glasgow, this has been overlooked. That Jamaica Street Bridge has been greatly overworked and overloaded has been evident for many years. So much has this been the case, that it has sometimes been compared to London Bridge in respect of the enormous traffic which passes constantly over it. The relief so needed has been long talked of, and a glance at the map will show at once how matters stand. The Finnieston district is one which has been largely developed, and has been fixed upon as the one which the business part of the community seem to think is the right place for new cross-river communication; and certainly there is good reason for such a decision. Notwithstanding the fact of this means of communication being so necessary so far west, and, if executed, may be quite sufficient there, I have such an idea of the necessity of more immediate relief to our Jamaica Street Bridge that we ought to have a permanent way, in addition to the swing bridge, across the river for our general traffic further up, and nearer to the centre of the town. Were the swing bridge at Finnieston built and opened for traffic to-morrow, I believe there would not be the requisite relief to the Broomielaw Bridge, and the necessity for another crossing nearer the town would be forced upon the community.

### THE CHURCH AT KNIGHTON-ON-TEME.

THE following description of the church at Knighton-on-Teme is by Mr. Wright Wilson, of Birmingham:—

Accompanied by two friends of kindred tastes, I lately visited the secluded little hamlet of Knighton-on-Teme, having been incited thereto by an enthusiastic description, given to me by an artist friend, of its deserted little Norman church. Having derived much gratification from my visit, I am anxious to direct the attention of artists, antiquaries, or lovers of rural scenery to the many attractions of the place.

From Newnham Bridge Station, Knighton lies about a mile to the north-west. Ascending by the road at the back of the station, the summit of a hill is soon reached, from which an extensive and beautiful view is obtained of the Teme valley, with grand blue-hills to the south-west. A few yards further on, a field gate presents itself on the left, which admits to an unenclosed road at the top of a steep descent, with high banks on each side, between which appear, on the rising ground on the opposite side of the valley, a cluster of buildings half-hidden by trees, and among them the grey shingles of the weathercock of the wooden tower of the church can just be distinguished. Descending the hill the lane passes through an orchard, crosses the little brook which runs along the bottom of the valley, and ascends the opposite bank. The church is now just before you, but on arriving at the churchyard I would advise the visitor to resist the impulse to climb the bank and get over the rails, and to pass along the cartway winding round to the south-east side of the slight mound on which the church is built, to the yard gate, as from this side the building is seen to the greatest advantage. From this point of view will be seen a small and extremely simple chapel, without aisles or transepts, but with an unusual extension of the walls of the nave westward, from within which rises a remarkable wooden tower, the spaces between the tower and the outer walls covered by lean-to roofs hipped at the north-west and south-west angles. This tower, with its silvery-grey, time-worn oak boarding, rude contrivances for emitting the sound of the bells, its pyramidal roof and slender oak pinnacles at the corners, is the most striking feature in the scene, and is charmingly picturesque and beautiful in colour. Next will be noted the Norman features of the church, the flat buttresses, and the remarkable south doorway with blank arcade over it—a feature to be found in several of the small churches of the district. The doorway is of unusually lofty proportions; it has angle shafts in the jambs with rude capitals, and an arch with cabled or twisted mouldings, and a broad band of diaper on the outer rim. The door itself retains the old band hinges with ornamental ends, which are probably of the same age as the stonework. In the eastern jamb an aperture has been rudely cut, partly through the shaft, probably to admit a stoup for holy water, which has since been removed. The arcade over the door is of four arches on detached columns, enriched with twisted, reticulated, and chevron ornaments. Placed against this doorway is an oaken porch of the fifteenth century, of very good design and proportions,



with carved spandrels. This porch cuts rather awkwardly across the columns of the arcade, but adds very much to the picturesque effect of this side, which without it would be rather flat, and wanting in shadow.

Passing to a closer examination of the exterior, it will be found that the walls stand on a bold moulded base, which is distinctively Norman, though there are reasons for supposing that when the western extension was built the old base mouldings from the western wall were reused, and the deficiency supplied with new, imitated from the old; but we had not time enough to examine the walls with the minuteness necessary before speaking with confidence on this question.

Of the chancel, the south wall was rebuilt from the base mouldings in the sixteenth century or later, and the eastern end in a barbarous way in the nineteenth. The north wall is original, and the jambs of a Norman window now walled up may be discerned from the interior. In the north wall of the nave there is a door opposite to that on the south, and a very narrow lancet window of the thirteenth century. There is also, close to the eastern end, a window of the fourteenth century of two lights with geometrical tracery, in the head of which are some interesting fragments of stained glass. There is a similar window on the south side opposite to it, and another of two lights with a square head west of the porch. Passing into the church we find a fine chancel arch of the Norman period, with enriched mouldings and shafted jambs. On each side of the arch is a blind arcade of two arches within an enclosing arch, with columns and rude capitals.

The roof is a fine specimen, probably of the fifteenth century, with moulded tie beams and principals, and curved ribs. Additional importance has been given to the western bay by boarding the rafters and forming a ceiling half-way up, the spaces being divided into panels by mouldings with bosses at the intersections. The feet of the principals rest on corbels carved with devices, some of which might have been intended as punning rebuses.

The seats are of a mean character, of deal, and the pulpit a gigantic three-decker of the same material, with a sound-board.

At the west end is a gallery, and the nave is here divided from the tower by an oak framed and plastered partition. West of the partition the huge oak supports and braces of the tower and bell cage are seen; two western lancets light this space, and I think it probable that these were taken out of the western wall of the church, and re-inserted when this part was added. There are three bells, one of considerable weight.

The chancel does not retain anything of much interest; there are slight indications of early painted decoration on the north wall. The sanctuary rail is of oak, with turned balusters, and not bad in its way.

There are no monumental remains of importance, the pavement of the chancel consists principally of grave stones to two or three local families, but none are older than the eighteenth century.

The church is in a dilapidated condition, and unless something is shortly done to keep out the rain it will soon be a ruin. The wet now comes through the roof in many places, and the tower is half uncovered, admitting the rain to the oak framing of the tower and bell cages. The walls are 3 feet in thickness, but, as was generally the case, were badly built, and have stood their seven hundred years in spite of, rather than because of, the way in which they were constructed. The facings of the exterior and interior are hardly bonded together at all, and considerable spaces in the middle of the walls are filled with clay. This, soaked with rain, has split the walls in several places, and will shortly destroy the whole if the very moderate sum that it would cost to repair the roofs cannot be found. I can hardly believe it possible that this will be withheld by the inhabitants of the well-kept and comfortable residences we saw in the neighbourhood; but it is a lamentable fact that the inhabitants of country towns and villages seldom appreciate in their old churches any of the qualities which give them their chief value in the eyes of others. Picturesqueness, unpretending simplicity, beauty of colour, the softening and harmonising effects of time, and the venerable associations which should especially endear them to the families who have long been settled in the district, go for nothing, and even the clergyman is seldom found who can be got to acknowledge any sympathy with these things, which are all willingly and joyfully sacrificed to the desire to have a smart, bright looking church, with staring and harsh colour, red and raw tile pavements, and "store" fittings selected from a trade catalogue. What are the historical associations and the effects produced by the mellowing hand of time for seven centuries when put in the scale with these?

The Norman font, hallowed by its office as one would imagine, is, in a neighbouring village to Knighton, mutilated, and lies turned upside down in the churchyard to make way for a new one.

Let us hope that in the work that may be done at Knighton one shall hear nothing of "thorough restoration," as it is generally understood. It were better that the church should become a ruin. Judicious repair is all that is necessary; the exterior faces of the wall need not be touched, nor should any of the masonry be even cleaned, or the charm of colour would be lost.

But while avoiding the destructive process called restoration, a

judicious repair may be safely effected, and is absolutely required. The roofs should be carefully examined, strengthened if necessary, and the coverings made watertight; and although it will be a difficult and delicate operation, the splitting of the masonry of the south doorway and the chancel arch may be arrested, and to some extent repaired. The exterior faces of the walls should be left as they are. The stained plaster, with brown masonry peeping through here and there; the warm broken colour of the tiled roof, and the soft grey of the tower, are charmingly harmonious and beautiful, and may remain to be a source of pleasure to many future generations of wanderers among these softly-rounded Shropshire hills, if a little money can be found, and a jealous care exercised in the way in which it is applied.

## SOME NINETEENTH-CENTURY ARCHITECTS.\*

By PROFESSOR T. ROGER SMITH.

(Continued from page 148.)

*Arthur Ashpitel.*

ARTHUR ASHPITEL, affectionately known for many years and in many circles as dear old Ashpitel, was a remarkable man. Concealed under the exterior of a sturdy, unimpressible-looking, John-Bullish Englishman—conspicuous, however, for those never-failing tokens of something good behind, a bright eye and a massive head—lay a warm heart, a kindly nature, an elegant fancy, true wit, classic learning, and the power of a natural but not an untaught musician. In easy circumstances, and taking an interest in many things, Ashpitel did not push his practice with keenness, and did not, in fact, build much; but he had a wonderful knowledge of all matters connected with materials, construction, the history of architecture, and the literature of all the arts; and his contributions to the early numbers of the Dictionary of the Architectural Publication Society, each of which goes far towards exhausting the subject on which it treats, are good witnesses to his attainments and his thoroughness. Ashpitel was the most delightful of companions and one of the most sociable of men, so that it was sometimes hard to understand when he made the time to be alone and do his work. But he did perform a great deal of that sort of work which is of essential service to the members of a liberal profession.

*Sir James Pennethorne.*

Sir James Pennethorne, who held for many years the appointment of architect to Her Majesty's Commissioners of Woods and Forests, was a remarkable man, little known outside London, but much employed in the metropolis. He began his career under Mr. Nash, the architect of the Brighton Pavilion (built in "Mr. Nash's positive order"), a man whose talents for street improvement erected Regent Street, Carlton House Terrace, and the Regent's Park. Pennethorne was employed to form New Oxford Street, Battersea Park, and Victoria Park, and he was the architect of several very good public buildings, such as the Museum of Practical Geology, the buildings of London University (behind Burlington House), the Record Office, the extension of Somerset House, and the Queen's ball-room at Buckingham Palace. He was a most painstaking and fastidious worker, grudging no trouble to improve and perfect his designs, and frequently recasting them. Like many other architects, Pennethorne's best design was never executed; it was for the Government Offices since built by Scott, and was one of several made by him for the Government before the competition took place. Had it been adopted, we should have to-day a far finer structure than the one actually built. Pennethorne did not mix much with his brother architects, and fancied himself unpopular, but he was the subject of a demonstration of respect which no other member of our profession, so far as I am aware, has received; for when his difficult and excellent work in the enlargement of Somerset House was completed, the architects of London subscribed, and had a gold medal struck and presented to him to testify their admiration of his work.

*Mr. Walters.*

Other architects of the Classic and Renaissance school were Walters, Thomson of Glasgow, Edward Barry, and F. P. Cockerell. Walters, who practised in Manchester, was a man of real genius, and has left his mark on the buildings of the great city where his chief work was done; but, if I mistake not, specimens of his skill are to be seen as far afield as Constantinople. His most considerable work was the Free Trade Hall, a building with an original but rather heavy exterior, and a fine interior, very cleverly arranged as an auditorium, and very successful. More original were the warehouses which he designed and erected, at a time when warehouses with an architectural exterior were all but unknown in Manchester; and so well did he grasp the conditions of the problem, that in all probability a sound judge of architecture examining the whole of the fine piles of such buildings now to be found in Manchester critically, would select Walters's as the best

\* A Paper read at a meeting of the Leeds Society of Architects.



The only other works of his that I am familiar with are the elegant stations which he erected for the directors of the Midland Railway on part of their line between Derby and Manchester. These are simple and unpretending, and at the same time each one of them is unmistakably an architectural work.

*"Greek" Thomson.*

"Greek" Thomson, as the eminent Glasgow architect was sometimes called, was a man whom I only had the opportunity to know through his works and by corresponding with him, but his buildings are so remarkable that his name seems to call for mention. He believed in the superiority of Greek architecture to every other style; he held the faith that a Greek Renaissance was as practicable as the Roman Renaissance with which we are all familiar, and he devoted his life to a practical demonstration of the soundness of this belief, for he erected in an Anglo-Greek style a large number of important buildings, the bulk of which are in Glasgow; and he suffered, I have been told, both from loss of commissions and from opposition, on account of his sturdy adherence to the lines he had laid down. He has, however, enriched Glasgow with some public buildings of the most delicate refinement, joined to vigour and originality. No one can pretend that his works are not thoroughly modern; no one can for a moment hesitate to admit that the feeling which animates them is quite Greek. They differ widely from the *néo-Grec* of France, and yet in many points they recall it. Few architects or critics will admire the whole of them; some may not admire every part of any one of them, and yet few will fail to admit that they are works of genius, that they are eminently successful, and that they include Renaissance work as beautiful as any city in Europe can show.

*E. M. Barry and F. P. Cockerell.*

Edward Barry and Frederick Pepys Cockerell have been too recently among us for me to be willing to say much about them. There was something of resemblance in their circumstances. Each was the gifted son of an eminent father; each was a singularly cultivated man, as well as accomplished architect; both possessed in no common degree the rare gifts of a power of conversation which made them welcome wherever they came; and in both cases a brilliant career met with a tragic ending by a sudden and unexpected death. Cockerell did not secure much public work, but the galleries of one of the water-colour societies in Pall Mall East, and Freemasons' Hall, remain as sufficiently conspicuous and striking specimens of his skill; but he was much employed, and was very successful, in domestic work. He was one of the most accomplished draughtsmen of his time, and was a gallant, high-spirited gentleman—and as much artist as gentleman. Cockerell will have been known to many here as having filled the post of honorary secretary of the Institute of Architects. By many of his colleagues, and many artists of all kinds, he was regretted as a beloved and trusted friend, singularly brilliant in society, of the finest and most generous temper, and capable of doing the noblest acts in the most simple, unobtrusive manner possible. Few men, in short, have been such a loss to us as he.

Edward Barry worked with his father during the closing years of his life, and after his death completed his Halifax Town Hall and some of his works at Westminster. Energetic and able, he sought and secured a fair share of public work, and his magnificent design for remodelling the National Gallery, which was successful in competition, but a mere fragment of which was carried out, will be remembered by many. He rebuilt Covent Garden Opera House, and added the Floral Hall, and built the Cannon Street and Charing Cross Hotels. Barry, in his domestic work, introduced the beautiful Renaissance of France, of the time of Francis I., and carried out several very successful country houses in it. He adopted the same style for his buildings belonging to the Temple, erected on the Thames Embankment. Here, however, he pushed ornament too far, and this can hardly be called one of his successful designs. Barry underwent a severe disappointment in connection with the Law Courts competition. The judges originally recommended that he and Street should be jointly employed, and after seeing this great prize within his reach he had to reconcile himself as best he could to the work being placed entirely in the hands of Mr. Street.

Edward Barry for some time held the position of Professor of Architecture at the Royal Academy, and his excellent lectures there delivered, and republished in a volume, remain as a memorial of him. His removal in the prime of life was a misfortune for our profession, and cut short a career which already had been crowned with brilliant success, and bid fair to be a prosperous and distinguished one had it been more prolonged.

*The Gothic Revivalists.*

The association of ideas, and the chances of personal acquaintance or friendship, have led almost unavoidably to the grouping together of many more architects of the Classic school than of any other, so that space has not been left for adequate mention of the men who, after Pugin and Barry, carried on the Gothic revival. Happily not a few of them are still living and working among us, as is the great master of English prose whose pen so powerfully aided that revival; and in one or two other instances, as

for example in the case of that able and most distinguished artist Mr. Street, whom we have only very recently lost, various considerations would seem to make it a little difficult to include an adequate notice. Some other observer of men and things may, I hope, sketch for you the whole group complete. I can only undertake three members of it. Among those who should be noticed in such a paper would be some whose archaeological inquiries, following in the wake of Pugin and of that accurate and indefatigable pioneer, Mr. Rickman, extended, and we may almost say perfected our knowledge of the architecture of the Middle Ages in Great Britain. Foremost among these was the learned and acute Willis, who seemed to read an old building just as easily as the merchant can detect the state of trade from the city article of his newspaper and the price list of his stockbroker. Hope, Petit, the most rapid and clever sketcher of his time, Brandon, Hudson Turner, and the indefatigable Parker, were among those who laboured successfully in this field. Last, perhaps, but by no means least, among these was Edmund Sharpe, of Lancaster. His books are among the best, his "Parallels" probably the best, of the publications of this century that illustrate English Gothic architecture; and his spirited and repeated expeditions when, in connection with the Architectural Association, he conducted an excursion of architects and architectural students to fields of study in this country and in France, have established an extraordinary claim on our admiration and respect. Sharpe was full of enthusiasm, energy, and knowledge, and was as keen a student of his art down to the day of his death as at any period.

Blore and Salvin, Carpenter and Woodward, Raphael Brandon and Somers Clarke, and that genial and kindly pair, Talbot Bury and Benjamin Ferrey, both, I believe, pupils of Pugin, are among the architects whose names occur to us as active in the earlier and middle days of the Gothic revival, and whom it would have been pleasant to notice, but this paper must close with a few words on Gilbert Scott, George Edmund Street, and William Burges.

*Sir Gilbert Scott.*

There are few names, if any, which I should wish to mention with more emphasis, and at the same time with more cordiality, than that of George Gilbert Scott. The man and his work filled a conspicuous place among the architects, and in the architecture, of the nineteenth century. The story of his life, told with a frankness that is at times startling, is readily accessible, and need not be here related, except in the shape of a very bald summary.

Scott was a man of immense application and perseverance, and his power of concentrating his efforts on the object before him, and of continuing them till that object was attained, was remarkable. His first successes, when in partnership with Moffatt, were won in competition. A large number of union workhouses were to be built under the new Poor Law, and Scott and Moffatt embraced every opportunity of competing for these, and had an extraordinary run of success. During this time he used to work with wonderful energy, late and early, and sometimes all night through; and he obtained a good deal of enthusiastic help from men who, like himself, were students of Gothic architecture, with the hope of practising it. This hope in Scott's case, at any rate, was abundantly realised, in the many churches he built and restored, and in his cathedral restorations. Some, at any rate, of his first churches were Early English of a severe type, like the one at Ambleside, and inclined to be heavy. Later he seemed to prefer late Early English or Decorated, and his work was a little tinged with Continental Gothic, though this appears much more in his secular buildings than in his churches.

The pressure of work was for some time such as to task the energies of the most active of men, even with the aid of a large and highly-trained staff, and some amusing stories were circulated about the results of such high-pressure work; but I believe that all which could be done by untiring diligence and rapid despatch to keep himself personally abreast of his work was done. I once, in the height of his busiest time, called on him to borrow the drawings of a public fountain which he was erecting in India. Scott was out, and the drawings were not forthcoming, but one of his staff offered the loan of Mr. Scott's sketch. This, when produced, turned out to be a sheet of double elephant paper, on which the plan, section and elevation were all drawn to quarter scale roughly, but with fair accuracy, and in full detail; and in addition sketches of the profiles of every moulding, and an idea of the character of the carving in capitals and other enrichments were added. In fact, every inch of this comparatively modest work was there designed, ready to be translated by a draughtsman into working drawings.

Scott had an intimate knowledge of the architecture of every part of England down to the peculiarities of individual churches; and with all building materials and modes of construction he was thoroughly conversant, as he was with every part of the history and features of Gothic architecture. His largeness of knowledge, his experience, and his great reputation, which was a tower of strength on which restoration committees and cathedral chapters could rely, caused him to be selected, and rendered him perhaps the fittest man to deal with difficulties in our cathedrals and abbey churches; and, however disappointing the employment of a stranger may have been to individuals who had strong claims in respect of individual fabrics, it was, on the whole, a happy circum-



stance that at the moment when nearly every cathedral in England was being repaired, there should be an architect of sufficient standing to command general confidence, and whose position entitled him to ask (and enabled him to obtain) funds large enough adequately to carry out the restorations he undertook; and who, when these works were entrusted to him, found skilled and experienced clerks of works who were good antiquaries themselves, and carried them out with, I believe, as little damage to the architecture, and as much sound construction and faithful restoration as was possible. This cathedral restoration practice was no doubt Scott's most important work, and it was work, so far as I am able to judge, which he did extremely well, far better, for example, than it had been done by an architect and antiquary of European reputation across the channel.

To see or hear Scott at his best, it was necessary to see him at Westminster Abbey. I well remember on the occasion of the first visit paid by the Architectural Association to the Abbey, the pains he took to see that the preliminaries were all in order; and when, at his request, the President and I called on him the day before the proposed visit, he startled us by saying: "I think we had better go down to the building and lay out the route." He then and there left everything else, walked down with us to the Abbey, summoned the clerk of works, and went through almost every portion of the building with us, so as to make sure that we understood the way in which the party would be led. He met us the following afternoon, and for about four hours led our party up and down and in and out; and when at last the endurance of some began to flag, it was not Scott, but the students who showed signs of fatigue.

The descriptions he would give on these occasions were admirable and were well delivered, for he would halt at a point of interest, wait till the party had clustered round him; and then with distinctness, and in a loud voice, different from the rather hurried utterance of his ordinary conversation, he would indicate what he wished us to look at, and pour forth from stores of knowledge which seemed inexhaustible, a flood of explanation, illustration, and criticism.

The best of many addresses on professional subjects which I have ever heard him deliver in public, were two papers read in the chapter-house of Westminster Abbey to parties of architects, on occasion of visits paid by the Conference of Architects. In 1876 he addressed us on the ancient examples of English architecture to be found in London. On another occasion he spoke on the varieties of vaulting to be found in the Abbey, and pointed out that, with one exception, every phase of vaulting current in the country was to be met with there. Nothing could exceed the learning, the simplicity, the directness shown in these two papers, and they produced a very great impression.

Hardly less effective were his lectures to the students of the Royal Academy. Happily these have been published in two goodly volumes, and their great value can be recognised by all. As actually delivered, there was not quite the same sense of perfect ease due to being on his own territory and addressing none but his own profession, which struck one so in the addresses given at the Abbey or at the Institute: there was, however, the addition of a marvellous set of drawings of great size and splendid execution, some notion of which may be got by examining the illustrations reduced from them in the published volume.

Scott was always willing to engage in a competition for a work of importance, and he threw himself into such a struggle with the greatest ardour. The Government Offices' competition found him successful in obtaining a high position, though not the first, but ultimately the work was put into his hands. Hamburg Cathedral, Edinburgh Cathedral, the Albert Memorial, and the Midland Railway Terminus and Hotel are among his successes in competition. He tried hard for the Law Courts but failed, and he must have been engaged on very many others. I have a vivid recollection of calling on Scott, at his request, on the day when the competitive drawings for the Law Courts went in. The whole house in Spring Gardens was like a bee-hive with clerks drawing, painting, tinting, scratching out, and putting last touches; there were vans at the door, and men struggling with enormous strainers on the stairs and along the passages. In the midst of this busy turmoil, but in a room a shade less disturbed than the rest of the place, sat Scott, haggard, unshaven, and looking as if he and many others had been up all night, as I have no doubt had been the case. He was engaged writing his report, about a paragraph in which he wished to see me. While we were considering this, I well remember how Thomas Allom came in fresh, bright, and cheery, unwound himself from a long comforter, and promptly taking up a brush and his colour-box, proceeded to finish up one of the perspectives with its last finishing touches, with a leisurely ease that formed a strange contrast to the hurry and pressure all round.

Sir Gilbert was a tall, well-built man, slightly inclined to be bald, of a fair complexion, with light hair. He had fine features, especially a well-cut mouth and chin, and a lofty, well-shaped head, with a high brow. His bright eye could light up with readiness. His manner was simple and unaffected; but there was at times a kind of hesitation about his address which was far, I believe, from being a true index of character.

Scott was buried in Westminster Abbey, as Barry had been before him, and Street was at a later and very recent date.

It is not so easy to form a just estimate of Scott's work now as it will be a generation hence. No doubt much of his ordinary church work suffered from hasty design and from being too much the work of his assistants; but his best churches, as for example the one built by him at Edensor, and Doncaster Church, are excellent. I have already said, or at least implied, that I consider the work he did in the restoration of our cathedrals his most important and in many respects his best work; and I have some reason to believe that he attached great importance to it himself. He had the good fortune to build two cathedrals, Hamburg and Edinburgh, but I have not had an opportunity of seeing either. If, however, Edinburgh is equal to the drawings he exhibited of it, there can be no doubt that it ranks high as a piece of sound, well-designed modern Gothic work.

His secular buildings include several very prominent ones, and some smaller. Of the latter, a very elegant example exists in Leeds in the shape of a banking office. Glasgow University College, one of his largest piles of building, is certainly disappointing both in mass and in detail. His Foreign and Colonial Office, a Renaissance building, with many deficiencies in the eyes of a careful student of Italian architecture, has certainly the merit of a good deal of boldness in its principal front, and a simple plan.

The Midland Station and Hotel at St. Pancras seems to be the most successful of his secular works with which I am acquainted. The richness of many of its features and the boldness of the skyline make it one of the best modern buildings in London, and perhaps the best example of the application of Gothic to business purposes which has been carried out there on a large scale since the Houses of Parliament.

In the Albert Memorial Scott has left behind him a work on which he managed to secure the co-operation of a large number of the first artists of the day, and which probably no other architect could have so enriched. It has not been the custom to be enthusiastic in its praise; but it is not the custom to be enthusiastic about any sort of artists or their works, except actors and actresses. Probably this Memorial will be considered, in after times, Scott's greatest success, and one of the architectural achievements of the century; and certainly I should be disposed myself to give it that praise, and to claim for Scott the merit of having conquered very great difficulties and produced a very striking monument.

We must not omit his literary work. In addition to other writings, Scott has the merit of having produced two of the best architectural books of the century. His lectures (already alluded to), published just after his decease, are equal to any piece of architectural analysis by Willis, or Sharpe, or Viollet le Duc, and his "Memorials of Westminster Abbey," a volume in which he enlisted the aid of several first-class men, is the best account of an ancient monument which has yet been given us by any writer.

(To be continued.)

## THE WINDSOR TAPESTRY WORKS.

THE following letter has been addressed by H.R.H. Prince Leopold to the various town councils of the country:—

"Claremont, Esher, Feb. 21, 1884.

"Gentlemen—You are probably aware that about seven years ago some tapestry works were established at Old Windsor with the object of reviving an art which had practically been lost in England since the time of King Charles II. They were at first carried on by Mr. H. Henry, the present director, with my approval and support, but on his own responsibility. About three years ago the works were taken over by a committee of guarantors, whose names you will find annexed. The production of the Windsor looms gained distinction at the Irish Exhibition of 1878, and large orders have been executed from persons in England and America.

"It is now felt that, in order to carry out the object in view, and to establish thoroughly and permanently an art industry, which is at once a connecting link between painting and manufactures, in order to do this it is necessary that its aims should be widely known, and that it should be understood that not only are works of production and reproduction undertaken at Windsor, but at this institution the beautiful specimens of ancient tapestry which decorate so many of the great English houses, and which time and moth are ruining, may be perfectly repaired. Although much has been already done to extend its sphere of action, I now desire to appeal to those public bodies who have so warmly supported technical education.

"A number of English apprentices are being trained at the works, and have shown remarkable aptitude. Tapestries have at all times commanded the interest of the art-loving world, and are particularly suited for the decoration of the large halls which belong to the various Corporations, to whom I am now appealing for support.

"I should be pleased to have your views on this matter, and to call a private meeting to discuss the subject and talk over the means by which a permanent national institution could be established.—Believe me, yours faithfully, LEOPOLD."



## NOTES AND COMMENTS.

THE designs for the proposed War and Admiralty Offices will be examined by a committee of five members, consisting of Mr. CHILDERS, the Chancellor of the Exchequer; Mr. SHAW-LEFEVRE, the First Commissioner of Works; and Mr. W. H. SMITH, who was First Lord of the Admiralty in the late Government, as representatives of official experience; with Mr. P. C. HARDWICK and Mr. EWAN CHRISTIAN to represent architecture. One hundred and twenty-seven sets of designs will have to be considered; the number is less than was anticipated, but many competitors gave up the contest before their designs were completed. It may be assumed that twenty-seven plans at least will be set aside at once from want of merit or from non-compliance with the conditions, so that the examiners will not have to deal with more than a hundred designs. As ten of them will be selected to be made the basis of the second competition, the chances of a good design are much greater than in ordinary competitions. The constitution of the committee is to be approved. There can be no question about the fairness of the architectural members.

A GOOD many years have elapsed since it was first suggested in *The Architect* that an exhibition of the works of former students of the Schools of the Science and Art Department ought to be held, in order to demonstrate the worth of the Government system. At last the suggestion has been taken up by the authorities, and the regulations for the proposed exhibition will be found in another column. If all the students who now occupy good positions as designers and artists will send examples of their work, the exhibition must be a success. But it is not improbable that many men will hesitate to acknowledge their indebtedness to the Department schools, and on that account the first experiment may not be an adequate test of the influence of South Kensington.

THE Bill for the Sanitary Inspection of Dwelling-houses, which bears the names of Mr. MONCKTON, the Marquis of STAFFORD, Mr. DAVENPORT, and Mr. H. H. FOWLER, demands attention from architects, for, if passed, it will add to the inconveniences which arise to them from official and officious people. It is proposed to appoint sanitary inspectors, who are to have powers corresponding with those of the inspectors of nuisances. Plans and descriptions of every proposed building are to be submitted to the said inspectors, and must have their approval before the building is erected. The plans are to show clearly the position of the drains, soil-pipes, traps, closets, privies, refuse receptacles, cisterns, pipes and fittings, ventilators, and "all other sanitary appliances and things in any such building," a description which is sufficiently comprehensive to include a chimney-breast ventilator. The elaborate plans showing all those details are to become the property of the local authority, and are to be filed by them for future reference. The drawings are to be open to the inspection of the owners and tenants, and copies may be supplied on payment of a fee, which is to be fixed. During the erection of the building the sanitary inspector is to have power to inspect the works as often as he considers necessary, and on their completion the owner is to give notice, and the inspector is then to test all the drains, soil-pipes, and sanitary fittings, and, if he is satisfied, he is to grant a certificate, without which the building cannot be lawfully occupied. So much for new buildings; but it is proposed that once a year at least the sanitary inspector and his assistants are to make an inspection of all the "sanitary appliances and things" in all buildings in his district. If anything is considered defective it is to be forthwith remedied; and in case of refusal or delay, the local authority may do the work at the owner's or occupier's cost.

THE final clause in the Bill is likely to insure that it will never pass through Parliament, for it says that "the expenses of the inspectors, as well as the expenses of any alterations required to be made to place buildings of every description in a proper sanitary condition, including the expense of opening the drains and pipes for inspection, to be paid by the owners of the property." Everyone knows that inspection of any description under a local authority is an expensive luxury,

giving rise to controversies, and exciting indignation in rate-payers' associations. But when individuals are responsible for the cost there will be no check, and it is difficult to estimate to what sum the outlay under "dwelling-houses inspection" will mount. Defects exist in some houses, and it would be possible to remedy them without the machinery that is proposed in the Bill. In regard to plans, the scheme is absurd. At present it is difficult to find a reasonable town surveyor; but to have men of the inspector-of-nuisances type sitting in judgment on architects' designs would be to bring back the old days of DOGBERRY and VERGES.

THE appendix to the Report of the Historical Manuscripts Commission, which relates to the documents preserved at Carlisle, throws some light on the history of the Cathedral. In 1359 a complaint is made as to the condition of the choir of the Cathedral, and to this the existence of the clerestory and east end of the choir is probably due, a remission of forty days' penance being assigned to all who gave assistance either in money or in manual labour. The licenses granted year by year to *questors*, empowered to beg round the country for the funds required for repairing the Cathedral, show that the beautiful decorated windows of the choir were not put in but at the cost of money obtained with difficulty. According to the Report, the manuscripts belonging to the See are well cared for, and in good condition at the present day, but the modern date of most of the registers and documents proves that at some time, shortly before the beginning of the eighteenth century, a wholesale destruction must have taken place, which spared but few examples of an earlier period. Valuable contributions to comparatively recent parochial history may be collected from a great number of bundles, each labelled with the name of some parish in the diocese.

SOME English painters have a reputation in France, although it is rarely sufficient to gain them commissions, but they are few in number. Our neighbours do not necessarily esteem a picture because it was produced in England. This was evident from the low prices obtained for portraits of race-horses at the sale of the late Count LAGRANGE's property. Although there are enthusiastic members in the French Jockey Club who are more English than the English themselves, not one of them cared to give more than thirty shillings for one of Mr. HARRY HALL's paintings. The art of the English goldsmith was not more fortunate, for the big cups, with figures from history and romance and sprawling horses, did not realise a third of the value that was attached to them when they were put forward as prizes at race meetings.

Mr. POYNTER, when addressing the students of the National Art Training School, on Wednesday, spoke on the subject of industrial design. The method adopted for teaching design in the art schools, he maintained, was the right one; and the designs produced by the students were generally well adapted to the purposes for which they were intended. But it could not be denied that manufacturers did not make much use of the talent in the local art schools. Mr. POYNTER admitted that too much attention had been given to painting in the schools—but the cause was the high price which was to be obtained for pictures. The effect of the address will be that more attention will be given to industrial design. If, however, it is desired that manufacturers should be attracted to the schools, it will be necessary to adopt some plan by which designers of position will be connected with them. This would not be an impossibility in any of the great manufacturing towns.

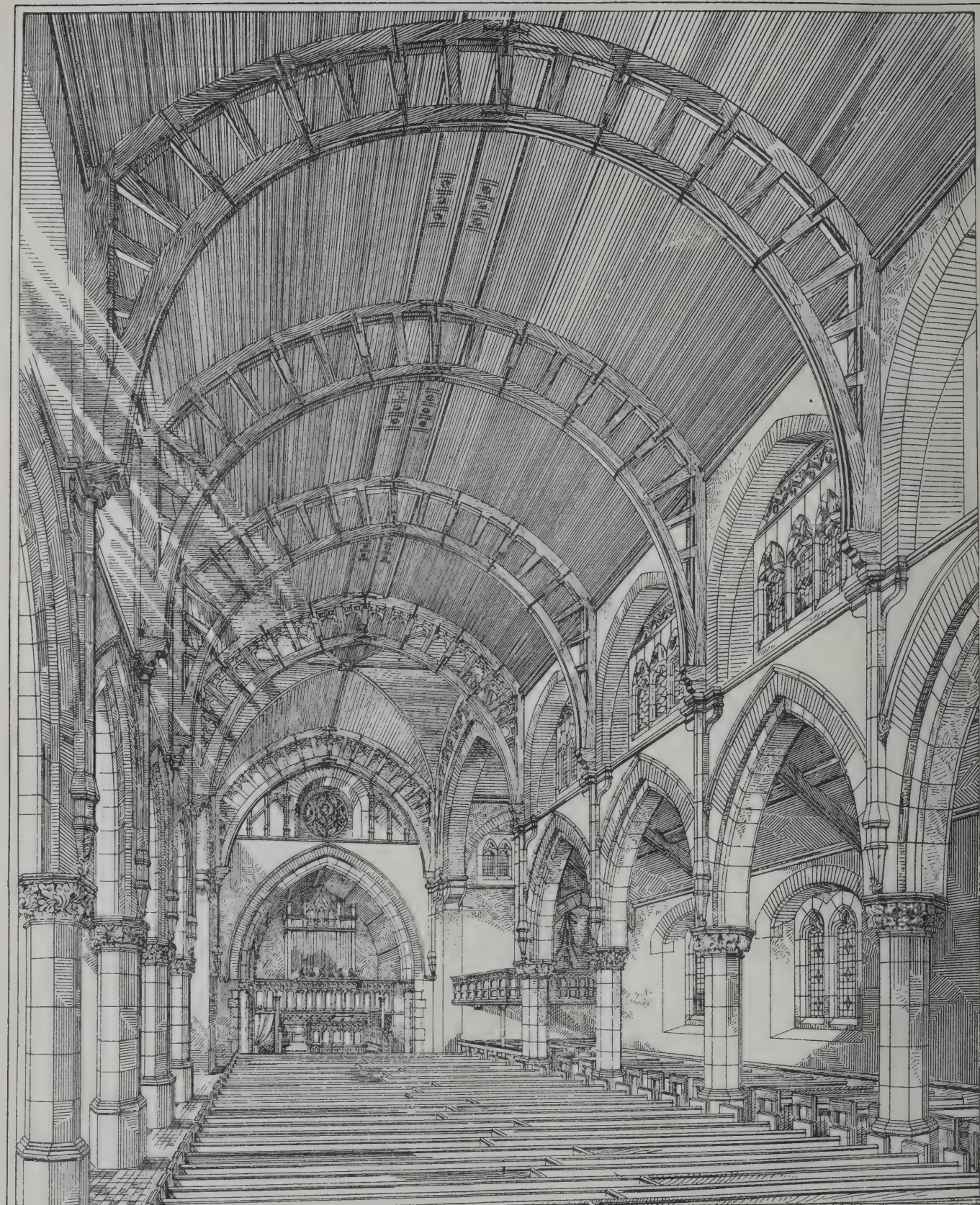
IT may be well to remember that in cases of dilapidations, it is necessary for the defendant to make a legal tender of the amount named in his surveyor's valuation. In a case relating to a house in Portland Place where the owner claimed 111*l.*, and the defendant's surveyor's valuation of the dilapidations was 14*l.* 10*s.*, Master FRANCIS said that even if he agreed with the latter valuation he must award costs against the defendant, because there had been no legal tender of the sum. He suggested that as a compromise 26*l.* should be paid beyond what had been paid into Court, that each party pay their own costs of action and reference, and divide the cost of the certificate.







The Architect, March 8<sup>th</sup> 1884.



Park Hill Congregational Church Nottingham.

J. Tait  
Architect.

Sprague & Co. 22 Martine Lane Cannon St. E.C.













NEW OFFICES, STANDARD LIFE ASSURANCE, MANCHESTER.

MESSRS CLEGG, SON & KNOWLES, ARCHITECTS













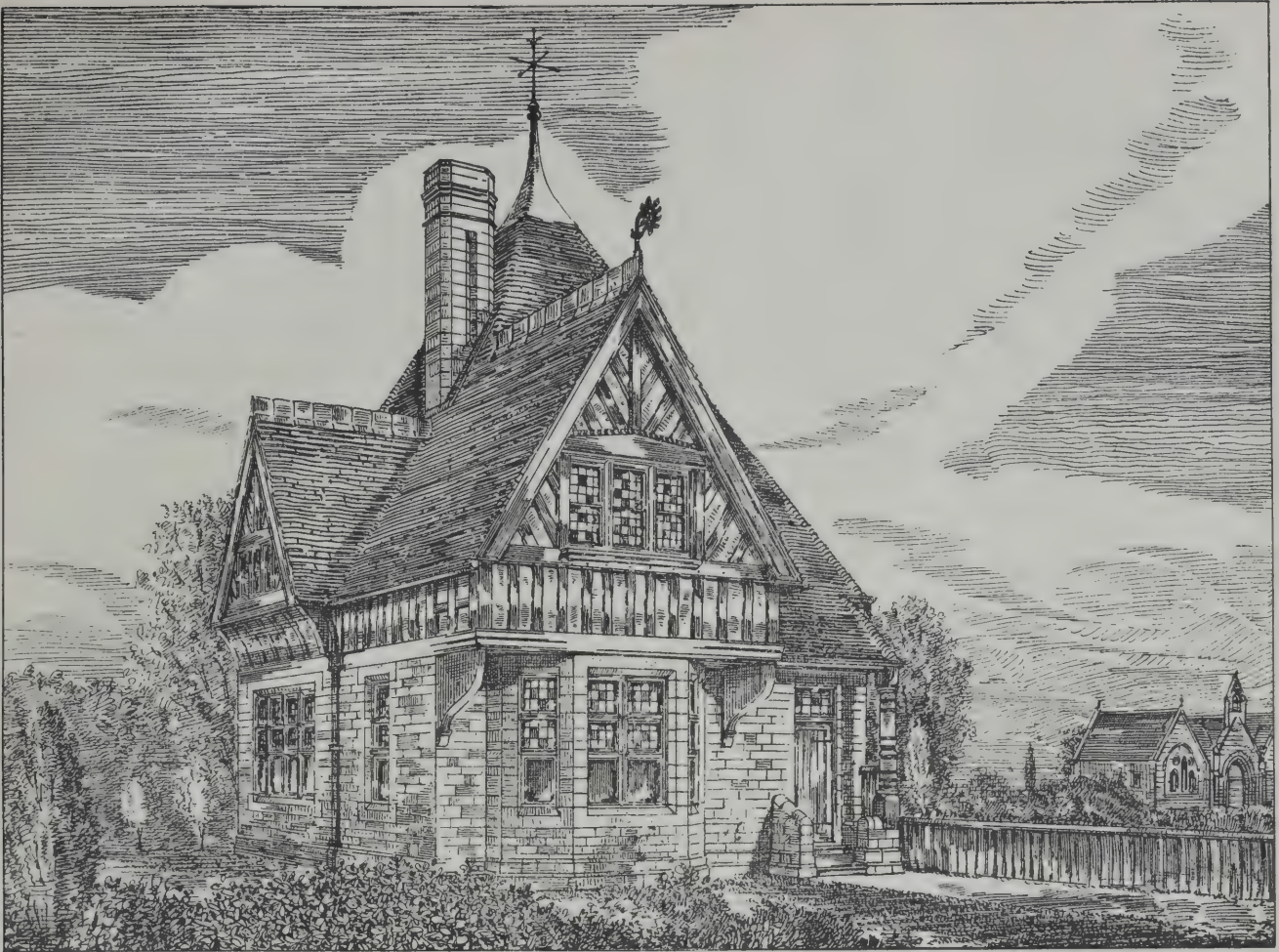












CEMETERY LODGE, MALMESBURY.



CEMETERY CHAPEL, MALMESBURY

A. G. CROSS, ARCHITECT.







## ILLUSTRATIONS.

STANDARD INSURANCE CO.'S OFFICES, MANCHESTER.

THIS illustration shows the design for the new Insurance Offices which are to be erected in King Street, Manchester. A description will be given afterwards. The architects are Messrs. CLEGG, SON & KNOWLES, of Manchester.

STAINED GLASS IN DRAWING-ROOM, FINGARRY, STIRLINGSHIRE.

THE subjects illustrated, typical of out-door sports, occupy the seven upper lights of drawing-room oriel in Fingarry, a view of which we illustrated recently. Each panel is surrounded with a rich border of roundells, &c., and the effect, enhanced by the strong setting of mullions and transoms, is exceedingly good. These windows, with the other stained glass throughout the house, were designed and made by Mr. JOSEPH MILLER, St. Vincent Street, Glasgow, after sketches and suggestions by the architect, Mr. J. B. WILSON, A.R.I.B.A., Glasgow.

PARK HILL CONGREGATIONAL CHURCH, NOTTINGHAM.

THIS building has been recently erected by Messrs. G. BELL & SON, of Nottingham, the contractors, from the designs of Mr. TAIT, architect, of Leicester. The walling is of Loughborough red pressed brick. The masonry is externally of Mansfield stone, and internally of Ancaster stone. The cillings are of deal, and the other internal joinery of pitch pine, unvarnished. The transeptal portion of the church is not at present executed, but a commodious lecture-room and vestries are provided in the rear of the building. The heating is by Messrs. BACON & Co.'s high-pressure hot-water system. The ornamental glazing and gas-fittings have been executed by Messrs. WINFIELD & Co., of Birmingham, and the furniture by Messrs. JONES & WILLIS, of Birmingham.

DESIGN FOR CEMETERY CHAPEL AND LODGE.

THESE designs were prepared for competition by Mr. ARTHUR G. CROSS, architect, Hastings. The materials proposed to be used were, for the walls, either sandstone ashlar from Colton Hill, Hollington, or other approved Staffordshire quarry, or built in brickwork faced with Fareham bricks. The dressings in either case to be of Ancaster or Douling stone. Half-timber work is introduced in the upper portions of the buildings. To be roofed with Broseley tiles. Estimated cost, 600*l.*—chapel, 350*l.*, and lodge, 250*l.*

## ARTISTS' BENEVOLENT INSTITUTION.

THE annual general meeting of the members of the Artists' General Benevolent Institution, which was held in the rooms of the Arundel Society, was presided over by Mr. Marks, R.A. The members present were, in addition to the chairman, Messrs. P. C. Hardwick (treasurer), J. E. Millais, W. Gale, J. R. Clayton, A. W. Hunt, T. W. Woods (Christie, Manson & Co.), W. W. Fenn, R. Brandon, J. W. S. Woods, and R. Collinson. In submitting the annual report of the President and Council for the adoption of the meeting, the Chairman congratulated the subscribers upon the continued prosperity and usefulness of the Institution. For the past year the income amounted to 4,683*l.*, of which 2,579*l.* was subscribed at the annual dinner, when Sir Stafford Northcote presided. Mr. Fenn seconded the motion for the adoption of the report, which was passed unanimously. Other formal resolutions as to the re-election of President and committees and officers having been passed, the Treasurer intimated his belief that General Lord Wolseley would take the chair at the annual dinner of the Society, to be held in May, the exact date not having been fixed upon. Subsequently, in the same rooms, an annual general meeting of the members of the Artists' Orphan Fund, established some dozen years ago to provide aid for the education of the sons and daughters of deceased painters, sculptors, &c., was held. According to the report, which was approved in 1883, the income of the Fund amounted to 1,188*l.*, which had afforded assistance to fifty-eight orphans, some of whom had been partly, others wholly, maintained and educated. The proceedings closed with a cordial vote of thanks to the Chairman.

## THE PROPOSED CAVENDISH MEMORIAL.

ABOUT six months ago a meeting of the subscribers to the monument proposed to be erected to the memory of the late Lord Frederick Cavendish on the South Nab at Bolton, was held for the selection of a design for the memorial. A resolution was passed by the meeting approving of the design of Mr. Thomas Worthington (of the firm of Worthington & Elgood), F.R.I.B.A., of Manchester, and that gentleman was at once instructed to prepare working drawings and a specification, and to invite tenders for the execution of the work. This he proceeded to do. Some delays, however, were unavoidable, as examinations of the ground were required in order to ascertain how far materials could be obtained on the site, and it was only a few weeks ago that tenders were obtained. At the time the tenders were under the consideration of the committee a letter was received from the Duke of Devonshire, enclosing the following appeal addressed to His Grace by various gentlemen well known in art circles against the erection of the monument on the proposed site:—

TO HIS GRACE THE DUKE OF DEVONSHIRE, K.G.

We, the undersigned, desire most respectfully to lay before your Grace our urgent appeal against the proposal to erect a monument in the immediate neighbourhood of Bolton Abbey, in such a position as to form a prominent feature in the scenery of Wharfedale.

While we sympathise most heartily with the feelings of those who desire to obtain your Grace's consent to placing the monument in that spot, we beg leave to express our opinion that by giving that consent your Grace would allow the beauty of what is, perhaps, the most perfectly beautiful valley in all England to be most seriously injured. It would be troubling your Grace far too much if we were to set forth in detail the reasons of that opinion. We may suggest that where every line of hillside is exquisite in curvature and proportion, the introduction of a break such as would be caused by the erection of the proposed memorial would be painful to the eye, while the scale of both hillside and abbey would be injuriously affected. The poetical power of the whole scene would also, it seems to us, be destroyed by the intrusion of any other architectural work, even though it were noble in itself, and possessed of noble associations, into a valley where both eye and mind are so completely satisfied as with the Priory of Bolton.—We remain, &c., Walter H. Pollock, A. W. Hunt (member of the Royal Water-Colour Society), Edmund Gosse, W. T. Loftie, J. C. C. Ripon, C. E. Dawkins, and Thomas Oldham Barlow, R.A.

His Grace's letter stated his own opinion that the choice of the position for the memorial was regarded with marked disapproval by the artistic world generally, and the honorary secretaries, in a circular issued to the subscribers in the matter, observed that the committee "could not read it otherwise than as an expression of his wish that the scheme should not be carried out in the mode proposed by them."

In order to decide on the course to be adopted in the altered circumstances, a meeting of subscribers has been held at the Law Institute, Piccadilly, Bradford. Mr. W. Fison presided.

Mr. J. H. Wade, at the outset, detailed the reasons which led to the meeting being called, and read the letter and memorial above referred to, as well as letters of apology from a number of gentlemen unable to attend the meeting. One or two of the writers proposed that the funds raised should now be devoted to educational purposes. Mr. Wade added that some time ago, when the Duke's steward, Mr. Martin, called upon him with reference to the matter, he said that the family would prefer the monument to be in Bradford.

The Chairman remarked that he had frequently heard objections to the monument as proposed, on the ground that, whilst it was in every respect a fitting memorial, it, in a very sensible manner, perpetuated crime.

Alderman Holden stated that, at the request of the committee, his father, Mr. T. Shaw, M.P., and Mr. A. Illingworth, M.P., had had interviews with the Marquis of Hartington, Lord Edward Cavendish, and Lady Egerton in the matter, and he gathered that on the part of the family there was an objection to the monument being erected on the South Nab. The committee had an idea that this was the case, and he thought the Duke's letter confirmed it. The committee had met that morning, and he would now move the resolution they came to, which was "That the memorial take the form of a statue or monument in Bradford or neighbourhood." He afterwards urged that it was absolutely necessary that something should be done without further delay, as the funds raised were fast dwindling away. The 1,500*l.* originally subscribed had been reduced, by various expenses, to a little over 1,000*l.*, and unless some decisive steps were soon taken he was afraid that there would be nothing left.

The resolution was seconded, and a somewhat long discussion ensued, in the course of which an amendment was moved by Mr. Briggs, and seconded, "That the memorial be erected at Bolton or in the neighbourhood."

On being put, seven voted for the amendment and eleven against, and thereupon a second amendment was moved to the effect that the funds should be devoted to certain scholarships to be decided by the committee. This motion, however, was not seconded, and the original proposition was afterwards voted upon.



and carried. A second resolution which was adopted empowered the committee to carry out the decision previously arrived at in regard to the selection of a design for the memorial.

### THE GOTHIC REVIVAL.

ON Monday evening Mr. William Morris delivered, in the hall of the Birmingham and Midland Institute, the first of two lectures on "The Gothic Revival." He said that the intellectual revolt to which that name was given was at its inception and in its present stages connected very really with the general progress of the world—with those aspirations towards freedom from which, in truth, no sincere art could ever be dissociated. It was the very essence of the academic pedantry to which the Renaissance led as its natural degradation that it was ignorant of real history. For it history fell asleep sometime about the death of Nero, to awake in Italy in the days of the Kaiser Maximilian. All that had gone before the days of Pericles was a vague, ill-understood, and empty dream; all that took place after the first palmy days of the Roman Empire was but a confused jostling of barbarous interests not worth looking at or considering. But the intellectual revolt which he had to speak about was even in its first days founded on an appreciation of the value of history. That feeling grew as the revolt strengthened, until at last a new science arose—almost a new sense, one might say—and real, living history became possible to us. Before describing the results of the revolt, the lecturer rapidly reviewed the history of Gothic art, showing how it was influenced in the various countries where it spread, and announced that for his next lecture he would give his opinion of what the chances of Gothic art are for the future, and whether or not we may have to dread for the twentieth century a recurrence of that inane tyranny of the eighteenth which our own time had, at least, felt uneasy under. By art he meant not only the lesser or architectural arts, or those allied to industrialism, but also that side of literature which was born of phantasy and imagination. Of Gothic art fully developed, and untouched as yet by the spirit of the Renaissance, he said that, wrapping in its folds all Europe and a large part of Asia, it created such a body of beauty as the earth had not seen before or since. The very essence of its beauty was that it was founded on reason, and, above all other arts, was intelligent and free. If the industrial arts in the north of Europe were in a very rude condition at the beginning of that period, if the technique of some of the arts—pottery, for instance—was rude, there was nothing either coarse or careless about their artistic qualities. The fourteenth-century furniture did not reach our standard of comfort, but every piece was properly made and properly ornamented—that was to say, was beautiful. Contrast that state of things, and the naturalness and absence of effort which marked it, with the fact that in the present day one could get nothing beautiful without very distinct and decided effort, and not too much at that. Gothic art had, moreover, another characteristic—it was progressive, confident, and intolerant. If there was history in every atom of it, it was not conscious history, but only an exultation in the present and a hope for the future. Deep in its soul, at the same time, lay the melancholy and sentiment of the North, and there was no stint in it of rough but kindly humour. Such as this it lasted, with some gains in certain directions, but on the whole with more losses, till the end of the fifteenth century; but with the beginning of the sixteenth came the change. Not only that it grew coarser and more meagre, but that on the top of this coarser popular art was thrust another art, produced by men who had gained a little more knowledge than the naive workman of the fourteenth century, and with that had gained some feeling for history. At the head of the great impulse towards change which then revealed itself was a mass of talent and genius composed of the most gifted men the world had ever seen, the blossom of the centuries of free art which had gone before; and the fatal effect which the change had upon art was for a time hidden by their splendour. But when they passed away they left behind them a mere dead mass of academical whims and pretences—the so-called art which prided itself on being exclusive, narrow, and uninteresting. The decay was in the end manifest in painting and poetry, as well as in architecture. That strange force which, for lack of a better word, we poor mortals called civilisation, played us a scurvy trick certainly, till it landed us, at the end of the eighteenth century, stripped of all poetry, with history despised behind us, and nothing but a blank prospect of mere utilitarianism. Nevertheless out of this came the intellectual rebellion which he had ventured to call the Gothic revival. The stirring among the dry bones began from some inspiration of what must perhaps be called a science—an historical research, at all events, on the side of language. The philological scholars discovered the true relations of one tongue to another, and so began that great demonstration of the unity of mankind, which was still going on. In the course of the study they discovered also the literary merits of the non-classical poems and other literature, and learned very much of the history and social conditions of the earlier nations, so that even the earliest of our ancestors became visible to us as men of like passions with ourselves. It was clear that imaginative litera-

ture could not sit quietly by while historical research was providing her with so large a mass of material, and accordingly from this time poetry—to use the term in its largest sense—was born again, and the school of art, which for lack of a better word we were compelled to call the school of romantic writers, arose. The long-faded splendour of the Renaissance was now to be illuminated by flashes of genius, as strong and real as that of the time before the first day of that tyrannous Renaissance. What that revival turned out to be, what might yet come of it—whether it was the glimmer of real daylight or the false dawn of a cold moon—all this he should have to ask them to consider in his next lecture, which is to be on Monday next.

### LONDON HOUSES.

ON Monday Mr. R. W. Edis, F.S.A., concluded his series of Cantor Lectures on "Building of London Houses." Referring to furniture, Mr. Edis said a certain eclecticism must prevail in items of movable furniture, but the general scheme of decoration and fittings should form part of a harmonious whole. Having built our houses, we crammed them with heavy, useless, and inartistic things, which recalled the line, "In dark places of the palace stood uncertain shapes." It was true we had brought in a new order of things, but to him it seemed we were yet labouring somewhat in the dark with regard to the comfort and general sanitation of houses. We were apt to get furniture and fittings which, like ready-made clothes, were often misfits, and not inclined to consider the requirements of the various rooms. By this want of forethought there was much increase of expense which might have been avoided. For instance, window recesses which could be fitted with box seats were finished with panelled and moulded box, altogether unnecessary. Recesses in rooms were completed with mouldings and skirtings, instead of cupboards. Window shutters and fittings were often so arranged that when the blinds were put up the shutters would not open, and when cupboards were provided their tops formed dust-traps, which helped to make the room unhealthy. The question of planning furniture should form part of the original design of the architect. He was reminded that constructive furniture could not always be carried out, inasmuch as the fittings if fixed to the walls became more or less the property of the landlord; but he believed the incoming tenant would be glad to take them over at a fair valuation. Mr. Edis complained that builders do not adopt the innumerable small fittings which are the invention of Americans, adding that persons who had visited the exhibitions of building appliances would have noticed the various articles to which he referred. Finally, he maintained that all those shams and absurdities of false construction, which, like Tennyson's "Brook," went on for ever, might be remedied if the control of the work was entrusted to a master mind.

At the close of the lecture the chairman, Mr. B. Francis Cobb, announced that the Society of Arts had decided to offer prizes of 500*l.* and 100*l.* for essays on the rebuilding of London, on architectural and sanitary construction, and on the rehousing of the poor.

### THE HISTORY OF ART.\*

THE origin of any art or science is not so much owing to the particular accident which happened to the individual concerned in that origin, as to the intellectual adaptiveness of that individual to receive impressions from the particular circumstance which occurred. Thus, whether painting was first discovered by the lovely girl who, watching the shadow of her lover, traced it in the wall as a memento of their affection, or whether it originated with Philologes in Egypt, or Cleanthes in Corinth, or long before Greece was inhabited, the principle is the same. Without the inherent susceptibility of form in the girl the intellectual faculties would never have been excited to define figures. Aristotle ascribes the honour of being the first painter to Euehir, a relation of the famous Dædales who lived in the year 1218 before the birth of Christ; but whoever was the inventor there is no doubt that its appearance among the Greeks was in no better a dress than what served just to represent the bare shadow of the object, which was done by merely circumscribing the figure they had a mind to express with a single line only. Afterwards two men in Corinth began to add other lines to their figures, which gave them an appearance of roundness. This manner was called "graphic." But even the improvement on the original one-line manner was so inconsiderable that they found it necessary to write underneath every drawing what it was designed to represent. When the Spaniards landed in South America, the mode by which the natives conveyed intelligence of the arrival of their king was by painting the dress of the strangers and their ships. This certainly was a simple and obvious mode of thought and communication; but, independent of all theory, there cannot be a doubt of the

\* An address delivered by Mr. Andrew Blair, artist, at the first annual dinner of the Dunfermline Art Club.



extreme antiquity of painting. The walls of Babylon were painted with different kinds of animals, hunting expeditions, and combats. We find in Ezekiel viii. 18, "And I went in and saw and beheld every form of creeping things, abominable beasts, and idols of the house of Israel portrayed on the walls round about." And again in chap. xxiii., "She saw men portrayed upon the walls; the figure of the Chaldeans portrayed in vermillion." The course of civilisation probably descended from Ethiopia to Egypt, yet there is evidence of the existence of painting and sculpture in Egypt more than eighteen centuries before Christ; and at that time the arts were in the highest condition that the Egyptian school ever attained to. It is now certain that as early as the nineteenth century before Christ the walls and temples of Thebes were decorated with paintings and sculptures. After this period art became a mere tool in the hands of the priests, and degenerated into *facsimiles* of perverted forms of gods and goddesses. Not a single picture by these painters has reached us, and the only works of sculpture are three statues by Memnon at the entrance of the temple at Thebes. Cimon, the Athenian, was the first, it is said, who designed the figure in a variety of postures, distinguished the several parts by their joints, and was the first who took notice of the folds of drapery. In what century most of the old masters lived we have no account, but about the foundation of Rome in 1750 B.C. the Greeks had carried painting to a great reputation. Phidias, who painted *The Battle of Marathon*, lived in 442 B.C., was famous both for painting and sculpture, particularly the latter. His statue of Jupiter was considered one of the seven wonders of the world. Zeuxis was another of those men who flourished about this time. He was famed for being the greatest colourist of the ancients, though Pliny tells us there were but four colours in use—white, yellow, red, and black. His famous picture of *Helena*, which he painted for the people of Cortona, was considered his best. Being very rich, he never sold any of his pictures, but gave them to public societies and his friends. He is said to have died from a violent fit of laughter brought on by his looking at a picture of an old woman of his own drawing. I hope none of us will meet with the same fate. Between the time of Zeuxis and Apelles a great many geniuses lived, but Apelles was so far ahead of them that he was called the prince of painters. He was a native of Largos, and lived about 330 B.C. Alexander the Great strictly commanded that no other painter should draw his portrait, and he gave him for his wife the beautiful Campaspe, with whom he had fallen in love; and it was her he had for his model for the famous picture of *Venus Rising from the Sea*. From the days of Apelles to Turpessus, the last of the ancient masters, who lived in the year 69 of the Christian era, and who painted with his left hand, from his time till 1240 there were a great many famous as painters or sculptors, but their names have perished with their works. All those who practised the arts of painting and sculpture before the year 580 I have classed as ancient masters. At that time Latin ceased to be the common language of Italy; all the arts and sciences which in the two preceding centuries had been brought very low by the continued invasion of northern nations, expired with it; and in the reign of the Emperor they soon after lay buried together in one common grave in the ruins of the Roman Empire.

I come now to the modern masters. The first of which we have any mention is Giovanni, born at Florence in 1240. He learned the art of painting in Italy, and was the pupil of some poor painter sent by the Government of Florence from Greece, and whom he soon surpassed both in drawing and colouring. It is said he was but little acquainted with the rules of perspective; yet the foundation he laid for future improvement entitles him to the name of the father of the first age of modern painters. Some of his works yet remain in Florence. He was also an excellent architect, and died very rich in the 60th year of his age. I shall pass over a number of years from his death in 1300, until we come to Jan Van Eyck, born in a town on the river Maas in 1370. He it was who invented the art of painting in oil, in 1410, thirty years before John Guttenberg, of Strasburg, found out the art of printing. He died in 1441, at the age of seventy years. In our National Gallery in London there is one specimen of his work; and I have seen a great number of beautiful, highly-finished pictures by him in the Museum of Bruges, in which city he spent most of his days, and he is therefore called John of Bruges. The Belgian Government erected a fine statue to his memory in a square of that city, which is called by his name. In speaking about Bruges, this reminds me that, in St. John's Hospital in that city, there are a number of beautiful pictures by Memling—a painter whose pictures are scarcely to be seen anywhere else; I do not think there are more than four or five of his works in England. If any of you chance to be in that city, I would recommend you to go to St. John's Hospital, where you will get a rare treat in seeing the "Memlings." The Corporation have also erected a statue to his memory in one of the squares. There are also to be seen in that city some of the finest examples of Flemish architecture to be found in Belgium; some of the finest houses have not been inhabited since Philip of Spain over-ran the Netherlands, and William the Silent was the means of the rise of the Dutch Republic. We come now to the greatest master of the moderns—Michael Angelo—born near Florence in 1474. This great man,

born only one year after Leonardo, has the reputation of being the greatest painter, sculptor, and architect that ever lived. He was profoundly skilled in anatomy, was also an excellent poet, and greatly esteemed by several Popes, the Duke of Tuscany, by the Republic of Venice, Francis I., and by other great men of his day. He was invited to Turkey by Solyman to consult about a design he had of making a bridge across the Hellespont, from Constantinople to Pera. His greatest work is *The Last Judgment*, in the Sistine's Chapel at Rome. He was the architect of St. Peter's at Rome, and he died in 1564, in the 90th year of his age. What a galaxy of great men lived at this time—Albert Durer, Melancthon, Leo X., and others. Albert Durer was born in 1470. His principal works were painted at Prague, in the palace of the Emperor Maximilian. He was loved by every person for his agreeable temper and happy manner in all places but at home, where the penurious and sordid humours of a miserable shrew—his wife—shortened his life, and he died in 1528 at the age of fifty-seven. Titian, born at Cadore in 1477, is said to be the best colourist of the moderns. He was eminent as a historical, landscape, and portrait painter. Like the great English master of portrait painting—Sir Joshua Reynolds—Titian painted the portraits of most of the nobility of the country where he lived. He had a splendid constitution, and was never ill until the year 1576, when he died of the plague, at the age of ninety-nine years. Giorgione was born in the same year as Titian. Having studied under Leonardo, he soon excelled him in beauty and strength of colouring. His principal picture, *Christ leaving the Cross*, is now at Venice, where it is held in great esteem. He died very young of the plague (which he got from his mistress, who was infected), at the age of thirty-four. Raphael, of Urbino, born in 1483, was styled the divine Raphael, and he was so admired by most of the artists of his day that they were ambitious of working under him. He seldom went out without a crowd of artists and others attending him, purely out of respect. He was anxious to join the Church in hopes of a cardinal's cap, but, falling into a fever, he died at the age of thirty-seven. When we think of the great number of splendid works which he produced, and which are in existence at the present day, we are reminded of another great genius—our own countryman, Robert Burns—who died at the same age. When we think of these two great men, we are lost in wonder how they produced their works unless it was by inspiration. Raphael entered the Vatican at the age of twenty-five. What then must have been his diligence, his devotion, and his genius? Incessant application and incessant thinking weakened his delicate constitution, his devoted passion for Fornerina, and the endless demands on his brain, brought him to the grave—borne down like Burns by excitement of every description, both mental and physical. In a life of him, an attempt is made to prove that his death was caused by a cold brought on by his hurrying from his work to the palace at the Pope's order. Hayden says of him in connection with this:—"But this is no refutation of the previous causes; the question is, What prepared him to be killed by such a cause? Incessant work and dissipation? no man can do both. He was an extraordinary creature, modest, amiable, and affectionate. His death gave a shock to Rome which those only can estimate who know the depth of Italian sensibility. But did he die too young? Not at all. He might have decayed, or he might have become more luxurious or more neglectful. No man dies too young who dies with all the sympathies of the world unexhausted about him. He has no manner, no affectation, no grand style—all is simple, natural, and unaffected; in fact, he was a great Christian painter, and seemed born to extend the influence of Christianity by his art." His cartoons at South Kensington Museum are splendid works. I may mention that there is one of his pictures in Broomhall House, the residence of the Earl of Elgin. Quentin Matsys, the blacksmith of Antwerp, who became a painter through the force of love, and for the sake of a wife; I dare say you all know his history. Salvator Rosa, born in 1456—called Rosa from his red hair. He painted both landscapes and figure subjects. Holbein, born at Basle in 1498, famous for being the painter of *Death's Dance*, which is in the town-hall there. A number of his works are in Hampton Court Palace, he having been employed by Henry VIII.; he died in 1554 at the age of fifty-six. Not to linger too long, I must pass on to 1577, when Rubens was born. He was not only a great painter but a statesman. A number of his works are at Antwerp, the Luxembourg, Paris, and in England. A collection of pictures which he bought in Italy he sold to the Duke of Buckingham for 10,000*l*. Snyders was born two years after Rubens, and was famous for his hunting scenes. A magnificent example of this renowned master is also to be seen in the Earl of Elgin's collection. Vandyke was born at Antwerp in 1599. He came over to England after Rubens had left it, and was employed by Charles I., who sat for his portrait, and conferred the honour of knighthood upon him. He was small in stature, but very handsome. He married the Lady Mary Ruthven, daughter of the Earl of Gowrie. There are a number of his works in the Scottish National Gallery. He died in 1641, and was buried in St. Paul's Cathedral. My time will not permit of speaking about a number of great painters who lived after Vandyke, such as Claud of Lorraine, Poussin, and others; but I will go on to the year 1606, when Rembrandt was born near Leyden. He had a method of preparing his grounds peculiar to



himself in those days, that was by making his grounds parti-coloured, and with colours that came nearest to the life. Upon this he touched in the virgin tints as little disturbed by the pencil as possible, and with great masses of lights and shadows, gave great force and freshness to his subject. Rembrandt was a great humourist, dressed himself in an old-fashioned slovenly manner, and delighted in mixing with the lower orders of the people. His *Night Watch*—a copy of which you see on the walls here—hangs in a room of the museum in Amsterdam, along with Vanderhelst's *Banquet of the Civic Guard*. Both of these pictures are worth going a long way to see. The *Night Watch*, unlike the copy before us, is not black and dark in colour, and when I entered that small room and saw those two pictures, I was perfectly astonished at their brilliancy. When I am speaking about Rembrandt, I cannot help referring to another of the Dutch masters, Paul Potter, whose famous *Bull* is at the Hague. I confess that this picture disappointed me. It appeared to me to want strength, but this was perhaps owing to my having seen so many "Rembrandts" at the same time. Rembrandt died at the age of sixty-two. I shall now pass on, and conclude with the founder of the English School—Sir Joshua Reynolds. Although there were some painters of note in England before his day, such as Dobson, John Greenhill, and John Riley, these men have left no permanent mark of their existence as painters; it was reserved for the great master of portraiture to form the British School of Painting.

### THE BIRMINGHAM GAUGE.

A MEETING of sheet-ironmakers was held in Birmingham on February 28, in order to decide what gauge was to be adopted in their trade after March 1, when the new standard wire gauge came into operation. The chairman, Mr. B. Hingley, said he was in favour of adopting the gauge approved by the Committee in Wolverhampton, and formulated by Mr. Hatton at their request.

Mr. Hatton said they lived in an age when many matters of disorder were being reduced to system, and the Birmingham wire gauge was one of them. Many of them thought that the inch, which was a standard measure, might consistently be subdivided into tenths, hundredths, and thousandths, and that the thousandth part of an inch, which scientists called a "mil," or any number of them, might be so arranged that in like manner they would serve for describing the thickness of copper, brass, iron, steel, lead, and all other metals and things, and that a series of numbers, as in the old Birmingham wire gauge, rearranged upon a scientific principle, would suffice as one gauge for all purposes, instead of having several gauges for several purposes. But they were told by those placed high in authority in the country that the standard wire gauge authorised by an order in Council was for measuring wire only, and not for flat iron; and if they used that gauge for flat iron it would be by sufferance, and without authority. The difficulty they were thereby placed in was that they had no standard or authorised gauge for flat iron, and the Birmingham wire gauge in about thirty-four hours' time would be a myth. While in that dilemma their counsels had been divided, some saying "Let us have the Whitworth gauge;" others, "Let us embrace the standard wire gauge;" others again—the do-nothings—"Let us go on as we are." To go on as they were implied that each manufacturer for himself, as long as he was undisturbed, would continue to interpret, according to his own fancy, and utilise the so-called Birmingham wire gauge, but which inevitably would terminate, and at no remote period, unless some other standard was subsequently provided, in an absorption into the standard wire gauge. Then, to embrace the standard gauge meant a large amount of sacrifice. As far as sheet iron went, it meant that all sheets that were 035, and now 21 w.g., would have to be sold as No. 20 w.g.; that all sheets that were 022, and now No. 25 B.w.g., would have to be sold as No. 24 w.g.; that all sheets that were 016, and now No. 28 B.w.g., would have to be sold as No. 27, all of which would suffer a clear loss of all the difference in price between singles and doubles, doubles and lattens, and extra lattens. Hoops would be similarly, but much more prejudicially affected. All this evil would happen, unfortunately, at a time when the trade was most heavily burdened with depression, and when selling prices carried very meagre profit. To adopt the Whitworth gauge in lieu of the old Birmingham gauge doubtless would be to substitute a scientific arrangement for a rude scale which possessed little merit, and which had nothing to recommend it but its bare antiquity. The general application of the Whitworth gauge would be utterly subversive of the rules that hitherto guided them, and productive of great vexation. Another method was open to adoption, and it was one that would cause the least possible disturbance to existing practice and calculation. It would operate without loss of any kind, and might be as satisfactory in every way as anything else that could be designed. The method which he recommended was a symmetrical adjustment of the Birmingham gauge under the assumption of a new name—an adjustment that for its simplicity, harmlessness, and general familiar features must, he thought, commend itself to all intelligent

and unprejudiced minds. The standard gauge probably suited the wire trade, or a portion of it; but it was unsuitable to the trades they represented, and it was very important that they should obtain the sympathy of the Board of Trade, and, if possible, induce the Board to make the gauge they might ask for a standard. To go on long as they were, which was equal to a muddle, would be impossible. The standard wire gauge would be injurious to them. The Whitworth gauge would entail great and vexatious alteration, and consequently it would be necessary to fix on some other way out of the disorder, and to have their practice made legal. If a better gauge than his could be put before the meeting he would gladly support it.

After some discussion the meeting resolved to adopt Mr. Hatton's gauge, and to deposit a copy at the Board of Trade offices, in order that it might be made legal by an Order in Council. The following is the proposed gauge:—

Parts of Inch.	No. of Gauge.	Proposed Thickness.	Parts of Inch.	No. of Gauge.	Proposed Thickness.
1	15°	1'000	1/32	20	0'392
	14°	0'9583		21	0'349
	13°	0'9167		22	0'312
	12°	0'8750		23	0'278
3/8	11°	0'8333	1/16	24	0'247
	10°	0'7917		25	0'220
	9°	0'7500		26	0'196
	8°	0'7083		27	0'174
1/2	7°	0'6666	3/32	28	0'15625
	6°	0'6250		29	0'139
	5°	0'5833		30	0'123
	4°	0'5416		31	0'110
5/8	3°	0'5000	1/8	32	0'098
	2°	0'4582		33	0'087
	1°	0'3964		34	0'077
	1	0'3532		35	0'069
3/4	2	0'3147	1/4	36	0'061
	3	0'2804		37	0'054
	4	0'2500		38	0'048
	5	0'2225		39	0'043
7/8	6	0'1981	1/2	40	0'0386
	7	0'1764		41	0'0343
	8	0'1570		42	0'0306
	9	0'1398		43	0'0272
1	10	0'1250	3/4	44	0'0242
	11	0'1113		45	0'0215
	12	0'0991		46	0'0192
	13	0'0882		47	0'0170
1 1/8	14	0'785	1	48	0'0152
	15	0'699		49	0'0135
	16	0'625		50	0'0120
	17	0'556		51	0'0107
1 1/4	18	0'495	1 1/8	52	0'0095
	19	0'440			

### EXHIBITION TO ILLUSTRATE THE OPERATIONS AND INFLUENCE OF SCHOOLS OF ART.

THE Committee of Council on Education consider that it will be of advantage to the art education of the country if an exhibition of works of art manufacture designed and executed by students of schools of art be held during the present year, in connection with and forming part of the International Exhibition at South Kensington. The works will consist of carvings in all materials, furniture, decorations, metal working of all kinds, jewellery, goldsmiths' work, pottery, glass, woven and printed fabrics, &c. All articles exhibited must be the work of past or present students of schools of art, or executed from designs by such students, the works themselves having been executed since the year 1862. The articles must be certified by the manufacturers, by the master of the school of art in which the student has received instruction, or by the student himself. The name of the manufacturer, of the school of art, and of the student will be published. The decision as to the acceptance of any work for exhibition will rest entirely with the Committee of Selection. The works must be sent to the Department on or before March 31. They must be addressed to the secretary, and accompanied by a note (written only on the first and third pages) describing them as they are meant to be inserted in the catalogue. The note should also state the names of the manufacturers, the designers, and the artisans; the names of the schools of art attended by any of them; and the periods for which they attended. The prices of each article may be given if it be desired. Every possible care will be taken of the works sent for exhibition, but the responsibility for loss or damage in transit and during the period of the exhibition will rest with the exhibitor.

Examples in the following sections will be eligible for admission:—Section 1. School studies in stages of instruction;



designs and models executed by the students in the schools. The latter will be placed with the section to which they belong. 2. Ceramic manufactures, porcelain, earthenware, stoneware, terra-cotta, &c. 3. Glass, cut, engraved, flashed, pressed, &c.; stained and painted glass in windows or panels. 4. Enamels on metal, cloisonné, champlevé, &c. 5. Ornamental metal-work—bronze, brass, iron, cast or wrought; drawings and photographs of such works as may have been executed. 6. Silver and gold plate, plated wares, electro deposits, including models for silver and gold work; drawings and photographs of such works as may have been executed. 7. Jewellery and personal ornaments—gold, silver, plated, or in any other suitable materials. 8. Furniture and wood carving, inlaid wood, parqueterie, papier mâché ware, &c. 9. Decorative carvings in stone or marble. 10. Lace—point, pillow, and machine-made lace; drawings and photographs of such as may have been executed. 11. Woven damasks in linen and cotton, plain or in colours. 12. Silks, ribbons, trimmings, &c., including furniture and dress fabrics. 13. Mixed woven fabrics for dresses, shawls, scarfs, &c. 14. Printed fabrics. 15. Carpets and tapestry, curtains, table-covers, &c. 16. Painted decorations, wall-papers, &c. 17. Lithographs, chromolithographs, &c. 18. Illuminations, illuminated addresses, title-pages of books, book-bindings, &c. 19. Etchings, engravings on wood, and drawings for engraving. 20. Painted photographs of objects of decorative art. 21. Architectural drawings, designs, and models of buildings. 22. Miscellaneous: articles not included in any of the above divisions, but yet coming within the object of this exhibition.

### THE LATE MR. C. J. LEA.

A WELL-KNOWN painter and decorator of Manchester has died somewhat suddenly, and has left a gap which will not easily be filled. The late Mr. Lea's place of business is in John Dalton Street—an old-established painter and paperhanger's shop known twenty years ago or so as Crowther's. Mr. Lea was no ordinary painter and decorator, no mere employer of hands, who found the capital and hired men to do all the work. He not only knew how the plainest, as well as the most elaborate, work of his trade should be done, with what materials, how they should be prepared, and how applied, but he could do every part of the work with his own hands. In the higher class of ornamentation and decorative work Mr. Lea was skilled. It was a treat to see him on the scaffold, first lightly sketching out symbol or ornament, fruit, flower, or foliage, and then with practised hand firmly, boldly, and quickly putting in the exact forms in permanent colours which were to be a delight for years to come to those who looked at them.

Mr. Lea's eye for harmony of colour was very good. He gave one the rich, warm, luxurious comfort that befits the drawing-room, the cheerful brightness of a bedroom, or the quiet dignity that one looks for in a church. The number of houses that Mr. Lea's taste and handiwork made graceful and comfortable in appearance, and of churches that he rendered seemly for divine worship, is very great. His talents procured him distinguished patronage. His work is to be found in the Duke of Westminster's Palace of Eaton, in the Manchester Town Hall, and in the Natural History Museum at South Kensington. Those architects who once availed themselves of his services were only too glad to secure his help in their after works. He cared about his work for the work's sake, and what was or could be hidden or concealed was as well and conscientiously done, as regards its quality, as work which must be done well because any defect would be certainly revealed. Mr. Lea was, moreover, a man of reading, culture, and refinement, a gentleman in the proper acceptance of the word, a man who was worth knowing for what there was in him. He was a good man too. Those near to him whom he leaves behind have no anguish to add to their sorrow for his loss. Modest and unpretending he was, but of a sort that we can ill afford to lose. We were all the better for what he was to and did for us, and none one whit the worse. Of how few can as much be said!

### TECHNICAL EDUCATION IN IRELAND.

A DEPUTATION of working-men a few days ago waited upon the Lord-Lieutenant to represent the desirability of the establishment of technical schools in Ireland. The deputation was introduced by the Lord Mayor. Mr. Dooney expressed a hope that if the movement proceeded the teaching would not be left altogether in the hands of professors. Mr. Simmons said he felt that if the Government did not assist them the industries of the country would die out. Mr. Mathers said the trades would prefer that the lectures should be delivered in their own halls rather than in public institutions. Alderman Dawson, M.P., said that the establishment of large factories and concerns had swept away the apprenticeship system, and they now wanted the technical training that was given under the old system. The Lord-Lieutenant,

in reply, complimented the working-men on the ability, and even eloquence, they had displayed in their speeches. Some people seemed to think that technical education should really teach the artisan in the school the whole of his trade or business. He did not think that was possible, but what he did think might be done, and was being done, was to give scientific knowledge that would give a certain degree of handiness to the householders which would enable them to apply that knowledge afterwards to their trade with intelligence and power. Everyone should have a knowledge of drawing and geometry, so as in after life to be able to express their ideas with their pencils. The National Board had made great efforts to teach practical agriculture to the boys in rural schools, and they had recently, first in Cork and then in Dublin, established schools to teach dairy work. A great deal also in the matter of needlework had been done. Unfortunately, as he was ready to admit, the Irish have not the same advantage as these in England, because there are not so many schools started here by individuals as in England. He would convey a report to his noble friend Lord Carlingford as to what had been said. With regard to the College of Science and the classes at Leinster House, he thought that the educational system at the College of Science should be extended so as to be available to working-men, and the same might possibly be done with the out lectures at Leinster House. He understood that the National Board were willing to open night classes in Marlborough Street Buildings for working-men, and he understood that they had adopted means of instructing teachers, who were sent through the country, in the use of tools, that they might afterwards impart their knowledge in this regard to the children under their care. He agreed as to the necessity of giving facilities for the proper education of workmen. Nothing will do more to remove discontent than that, and if they did that they should have, he sincerely trusted, a time of peace and content in Ireland. He hoped that this movement and others to raise again industries in this country would succeed, and he assured them that nothing would give him greater pleasure than that he should have had a humble share in forwarding that great work. The deputation then retired.

### MASONS' MARKS.

A MONTHLY meeting of the Newcastle Society of Antiquaries was held on February 27, when it was announced that Mr. Gibson, the castle attendant, had prepared a collection of masons' marks found on the exterior and interior walls of the castle. These he placed on the table.

Mr. Strangeways proposed that the collection should be published in the Transactions of the Society, and that a vote of thanks should be given to the curator for the great trouble he must have taken in the matter.

Mr. Hodges seconded the motion. He said that masons' marks first appeared at a very early point of the twelfth century. At that period they were engraved on the outer face of the stone. Subsequently they were put on the inside, but from the fourteenth century down to the last century they found them appearing on the face of the stone again. The same marks which occurred in the castle appeared in Hexham Abbey, the cathedrals of Carlisle and Durham, and many other buildings, showing that a band of free-masons went about from building to building, and that it was the custom of each man to put his mark on each stone he dressed.

Dr. Armstrong said that each mason was formerly paid according to his work, and each had his mark which he put on the stones he dressed. Any mason forging the mark of a brother mason was liable to death. These marks were found on all the old castles and old buildings throughout the kingdom. If they went to Lumley Castle they could see them by the dozen. In Warkworth Castle, and, indeed, in all the old castles, they would see them, and be able to trace one man's work throughout the whole building. If Canon Tristram was a member of the Society, he was one that could give them the best account of mark masonry. In his travels in the Holy Land Canon Tristram could trace stones intended for the Temple on the way from Joppa to Jerusalem. The stones were all dressed and prepared ready for fitting into the Temple before they left the quarries. Some of the stones met with accidents in the course of transit, and were broken; and these were still lying between Joppa and Jerusalem, with the masons' marks upon them. He suspected antiquaries would find that masons' marks were of a much earlier date than had been stated that night.

Mr. Holmes: And also at a later date. The masons have their marks now. The Chairman: I am afraid it cannot be said they mark the stones now. Mr. Holmes: When the contractor's agent comes round he sees the marks on the stones and measures them. The Chairman said it was very desirable that men should acknowledge their own work; for that would cause them to endeavour to do their work all the better in order to keep up their reputation. Mr. Holmes said that he had an idea that the masons' marks were simply either Runic or letters of the old alphabet. The mason's initial worked in probably with his master's. The motion was cordially carried.





#### The Presidency of the Institute.

SIR,—Many considerations point to the urgent necessity for a society of such high public character and importance as the Royal Institute of British Architects to have for its presiding officer a gentleman of the very first standing. Moreover, we are allowed to understand that the Council have unreservedly abandoned their claim to nominate a president in the way they have recently done. It would be an act of grace, therefore, if they were now to nominate some one who is expressly outside their own circle. There is one gentleman whom I venture to name as being particularly well entitled to the honour: I mean Mr. George Godwin. Not only has he served the profession (you, Mr. Editor, will know under what peculiar difficulties) as a high-class journalist for nearly forty years, but he has made for himself throughout the Empire, and, one may say, the world, a name universally known and held in honour. It may not be in bad taste if I hint further that he is a direct benefactor to the Institute to a large amount—I think the largest amount ever given to the Institute since its foundation. That he is a man of the widest experience of affairs, professional and otherwise, of generous feelings, excellent presence, perfect manners, it is needless to add. I regard it as highly creditable to the Government that he has been placed on the Royal Commission recently appointed in a very important cause with which he is familiar; and I think it would be equally creditable to the authorities of our profession if he were nominated—to be, I feel sure, elected with enthusiasm—as the next President of the Institute.

Yours, &c.,

AN OLD MEMBER OF COUNCIL.

#### The Institute Election.

SIR,—A circular has been sent out by the Council inviting members to "mention" four names for nomination on the house-list for the new Council. We have had no intimation of what this proceeding is intended for, and I am sure it is useless for private members to suppose that, without what was called in the debate on Mr. Ridge's motion a "cabal" or "conspiracy," it can be of any use at all. If the members in any number have a desire to take part really in the election, it can only be done by a preliminary meeting; and I would ask, Why cannot we be invited to meet in that way at the Institute rooms openly? It seems to be the general opinion that something ought to be done as regards future elections, and this is the only way in which it can be done, except by resorting to secrecy. I always thought it a pity that Mr. Street's election three years ago required the aid of private meetings and circulars, but I see that it could not be done in any other way, and, unless a meeting can be called now at the rooms of the Institute, there is no other way open to us for influencing the election as we are held entitled to do. The existing Council have it all their own way, for what I can see, to appoint through the house-list whom they please, if only they will vote for it solid, which they always seem to do. If the members are serious in wishing for new blood, they must do something more than they have done as yet. Somebody must also take the lead; and if two or three try it in different directions, all the better perhaps. We want to be stirred up a good deal more than we are, and I don't see that anyone can be hurt much, whatever happens.

Yours,

A MELANCHOLY FELLOW.

#### Buckfast Abbey.

SIR,—Outside the "charmed circle" of the council and officials of the Society of Antiquaries, no one could have imagined that Mr. Walters had seen Mr. Rowe's book before it was put into his hands by the Secretary, when he was endeavouring to describe his drawing and plans of Buckfast Abbey. They perhaps had more information than was vouchsafed to the Fellows, for they had in a fit of liberality granted a sum of money to continue the excavations. In justice to a painstaking antiquary and an old acquaintance I supplied what appeared to be an omission.

I am, yours &c.

J. TOM BURGESS, F.S.A.

Society of Antiquaries, London:  
March 6, 1884.

#### Re-Arbitrations.

SIR,—In the report of a case in the Court of Appeal—*Fraser v. Ehrensperger*—reported in the March number of the *Law Journal*, confirming the case of *Meier v. Rouse*, it appears to be now clear that without the words "this submission to be made a rule of Court" in the agreement to refer, either party may retire from the agreement at any moment up to the making of the award.

In other words, each party agrees to refer the dispute to arbitration so long as he and his opponent remain of the same mind—an arrangement which is very far from being businesslike. It would appear from this that the arbitration clause in building contracts, as at present drawn, is capable of being made abortive at the instance of either party.

As this is a matter of great importance, it occurred to me that it is not possible to give too great publicity to the decision.

I remain, Sir, yours faithfully,

157 Wool Exchange: HERBERT D. APPLETON, A.R.I.B.A.  
March 3, 1884.

#### Ventilation of Theatres.

SIR,—There are a great many opinions being expressed just at present in the form of papers read and letters to contemporaries, as to how to ventilate a theatre, but there seems to be such an opposition and general confusion of "ideas" upon the subject, that it is greatly to be feared but little good will come of the agitation. It would be a pity, however, that such a favourable opportunity should be allowed to pass for rectifying such a notorious evil as the bad ventilation and vile draughts which exist in almost every theatre.

We think now that attention has been drawn to it, advantage should be taken by theatrical managers of the system of ventilation which Mr. J. P. Seddon, in a paper recently read by him, so warmly recommends, and which he demonstrated to be so successful that by the simple application of it to a theatre in Manchester, the enterprising manager was enabled to retire shortly after with an ample fortune, all previous managers of this theatre having been ruined entirely through the defective ventilation.

We have to thank Mr. Seddon for his valuable advocacy of our system, and for so convincingly proving the efficiency and excellence of our air-pump ventilators, with which the theatre in question is ventilated, there being only two leading theatres in Manchester, the Prince's and the Queen's, both of which are ventilated with our system of ventilation. Should any other "manager" feel inclined to make his fortune, we can only assure him that the services of the same "genii" who so ably assisted the Manchester gentleman are at his disposal, and that success in every case is *guaranteed*. After an offer like this, we think no one will have a right to say that there is no system at present in existence with which a theatre can be efficiently ventilated, and by which the audience may enjoy a play with pleasure to the mind and comfort to the body.

We are, yours truly,

64 Holborn Viaduct:  
March 3.

ROBERT BOYLE & SON.

#### Stained Glass.

SIR,—Having read with great interest your article of this week upon "Glass Painting at the Royal Academy," I should like to avail myself of a small portion of your space to refer to one or two points.

I heartily approve your advocacy of the study and exposition, at the Royal Academy, of the arts of decoration and ornament. There is no branch of an architect's work, as I take it, which offers a more delightful or inexhaustible field for study than that of interior decoration, sadly neglected and woefully misunderstood as it seems to be by many, if not most, modern architects. It is difficult to understand how an architect who has built a church, let us say, or a house in a certain style, can contentedly hand over the decoration of by far the most important part of his work—the interior of the building—to the professional decorator. Yet we see this done every day, with what frequent result of unscholarly inconsistency and vulgar travesty of style your readers know only too well. Painful memories arise as one approaches this subject of Victorian versions of Grecian ornament mixed with strange arabesques, cribbed wholesale from the "Grammar of Ornament," or evolved—Heaven knows how!—from the mystic resources of "the trade," stencilled or painted on the walls and ceilings of rooms in the style of the Italian Renaissance, or, indeed, of any other, for the dictates of "the trade" are not as a rule modified by paltry considerations of style. How many of our beautiful old parish churches are ruined in internal effect by the awful doings of the "ecclesiastical decorator!" Do we not know his playful use of sky blue, gold leaf, and vermilion? Are we not familiar with his vivid grounds plentifully bespattered with "Gothic" emblems, utterly un-Gothic in feeling, in colour, and frequently in position? Have we not seen, in almost every church which has had the misfortune to possess—any time in the last fifty years—a benefactor memorially inclined, the vitreous vulgarity of a memorial window, mock-mediaeval in drawing, hot and glaring in colour, shedding its garish light on pews of treacly-looking varnished pine and floors of shiny tiles, and making one long for a gas explosion sufficiently vigorous to blow these obtrusive caricatures to atoms without harming the more substantial fabric? That immense improvements have been, and are still being, made in the particular art of glass painting as in decorative art generally I admit freely, but



there is still a very great deal to be done, and the improvement might be less gradual and more certain if architects in general would follow the example set by men like Mr. Aitchison and Mr. Bodley, and devote more of their time and energy to the careful study of colour and decorative design, not only in mural decoration or glass painting—which is, after all, a species of mural decoration—but also in hangings, wall-papers, carpets, and all the fittings and furniture of buildings, civil and ecclesiastical. I mention Mr. Bodley's name because I see with pleasure that you include him in the list of those at the head of the profession whom you would desire to hear, and because I am afraid that due credit is only given by a very limited circle to the highly-cultivated intelligence, the scholarly attainments, and the numerous and uncommon decorative achievements of that gentleman. Mr. Bodley is a master of colour, as he evinces by his fearless handling of wall and roof decoration in churches, and his treatment of house interiors. He is one of the very few modern architects who appear to thoroughly sympathise with and consistently practise the ancient method of applying colour throughout to the walls, roofs, piers, arches, and even tracery of churches; and he is, furthermore, skilled in the design and colouring of stained glass. Indeed, it is probable that Messrs. Bodley and Garner have designed more stained glass for churches than almost any other living architects.

I can hardly think that the admiration bestowed upon the work of Mr. Burne Jones by the rising generation of artists is that evoked by eccentricity, unless it is so in the sense that any artist who rises above commonplace, and departs from the usual method of his contemporaries, is to be considered eccentric. I would rather attribute the applause to the "more wholesome sentiment" of which you speak. I can scarcely understand, with you, that "the forte of Mr. Burne Jones might prove to be colour-glass work exclusively," for I think we cannot afford to lose him from the wider field of decorative picture painting. I must not, however, trespass further on your space, as I fear my letter has already grown to unwarrantable length.

Yours faithfully,

8 Gray's Inn Square.

E. P. WARREN.

## LEGAL.

### High Court of Justice.

(Before Mr. JUSTICE WILLIAMS and Mr. JUSTICE SMITH.)

HOOKWAY v. LONGSTAFF.

ARCHITECTS' CERTIFICATES.

This was a special case stated to obtain a decision under a building contract, viz. whether or not the certificate of the architect was, under the clauses of the building contract in question, subject to an appeal to an arbitrator, or whether the architect's decision must be taken as final. The plaintiff was a builder, and the defendant was the owner of a mansion at Morthoe, North Devon. The plaintiff contracted with the defendant to make certain alterations to the house and to execute certain other work in accordance with the architect's drawings and specifications for the sum of 4,998*l.* The point in dispute really turned on the printed conditions of the contract, one of which provided that the architect should be at liberty to make any alterations, additions, or omissions to or from the contract, but that such variations were in no way to vitiate or annul the contract. The value of these was to be ascertained according to the usual mode of meaning, and to be regulated by the prices contained in the schedule. Where, however, the schedule had not been supplied or would not apply, the prices were to be determined by the architect in a reasonable manner. Another condition was to the effect that every dispute, difference, or controversy which arose between the employer and contractor, or between the architect and contractor, except as to matters left to the architect's sole decision, should be decided by him without reference to any other person. In this case the architect had given a certificate in respect of "extras," and the plaintiff had complained of the amount allowed under that certificate, and demanded to have the matter referred to arbitration, on the ground that the architect had not ascertained and determined the matters mentioned in the certificate in a reasonable manner. The defendant had declined to have the matter thus referred, and contended that he was not bound to take such a course; and plaintiff's counsel submitted that his client had this right to refer in consequence of the architect not having ascertained the "extras" in a reasonable way.

Counsel for the defendant pointed out that this was a tripartite contract, the architect being a contracting party as well as the plaintiff and defendant. Under the contract the defendant was to pay only the value as ascertained by the architect; and if the architect had not ascertained the value in a reasonable manner, he did not see why the plaintiff should not bring an action against him. The price the employer had to pay was the amount added to or deducted from the contract by the architect, and this provision had been put in the contract to prevent disputes between the parties.

Mr. Justice Watkin Williams said that he was of opinion that there should be judgment for the plaintiff, who was entitled to have the matter referred to arbitration, because it did not come within the clause as being "matters or things left to the sole decision of the arbitrator."

Mr. Justice A. L. Smith concurred. The case is therefore to be referred, and the costs of the special case will be costs of the arbitration.

### High Court of Justice.

(Before Mr. JUSTICE MATHEW.)

SCALES v. REDFORD AND POTTER.

This was an action for personal injuries alleged to have been incurred by the defendants' negligence. The plaintiff was a master slater; the defendants were a firm of builders. In July 1883 the plaintiff was employed by a firm called Roberts & Co. to slate some houses that the defendants were building at Horsham. On beginning the work the plaintiff found that the ladder which the defendants had fixed leading to the roof of the house was not in a convenient position. He accordingly slackened the rope by which the ladder was tied to the scaffolding at the top, and moved the ladder at the bottom. He then ascended again to tighten the rope at the top, and while he was doing so the rope snapped, and, the ladder falling, the plaintiff came to the ground from a height of 25 feet. Injury was done to his wrist and elbow, necessitating medical supervision for six weeks and cessation of work for fourteen weeks. The defendants' case was that the rope was amply sufficient for the purpose for which it was used, and must therefore have been burst by the plaintiff prising the ladder at the bottom without having first untied it at the top, or must have got cut by the plaintiff dropping a slate upon it. The defendants produced two ends of rope, which their witnesses swore was the rope that had tied the ladder. These ends were of strong rope and in good condition, presenting the appearance of having been separated by a cut.

Mr. Justice Mathew gave judgment for the plaintiff for 75*l.*, summing up the case to the following effect:—The plaintiff had only acted in the usual course of his business, and at the invitation of the defendants. The case for the plaintiff was that the rope had been rotten. To meet this, the defendants had produced a sound rope in Court. He (the learned Judge) was unable to believe that that rope was the one used, though he exonerated the defendants themselves of any knowledge to the contrary. The history of the rope was not traced in a satisfactory manner, and no theories had been advanced that could account for the extraordinary way in which it was divided.

### Sheffield County Court.—Feb. 28.

(Before Mr. J. ELLISON, Judge.)

WALKER, EATON & CO. v. JOHN TURTON & CO.

This action, which had been remitted from the High Court of Justice, was to recover a sum of 26*l.* 0*s.* 10*d.*, balance of account for goods sold and delivered. It involved a question of usage in the iron trade. There was a counter claim. The judge said that with respect to one of the items of the defendants' claim, 18*l.* 16*s.*, it seemed to refer to a general custom in the trade for the defendants as customers or rollers to return to the plaintiffs as founders the old metal, and in this case they had returned two old cog-wheels to the plaintiffs. There was no doubt from the evidence of the defendants' witnesses that there was a practice in the trade, a very common practice, of returning the old metal to the founder as part of payment of the current account. There was no question about it. The real question involved in this issue was this—Is there a custom or an implied agreement between these parties obliging the plaintiffs to take old metal back instead of money? And, if so, how is such an implied agreement made out, and when was it created or when did it exist for the first time? These parties had dealt together for some thirteen years. During that time the plaintiffs had delivered large quantities of manufactured material to the defendants, who had used it, and who had from time to time undoubtedly returned old metal to the plaintiffs as part payment, and as money paid by them towards the current account. It appeared to him that all that had been done in the matter between the parties simply amounted to this, that for the whole period of the time of trading, with the exception of the years 1880 and 1881, during which years the defendants did not appear to have returned any old metal, they had returned the old metal, and he (His Honour) thought simply as a matter of convenience between parties. It was quite clear that it was for their convenience that such usage or practice of the trade should exist; but the question was—Is there any custom or implied agreement by these parties which makes it obligatory on the part of the plaintiffs taking this old metal back as money? He found a negative to that proposition, and said it was simply a matter done for the sake of convenience. There was neither a custom or an implied contract which justified the claim of 18*l.* 16*s.*, therefore, with the exception of 13*s.*, the issue would be found entirely in favour of the plaintiffs.



## WORKS IN PROGRESS.

**St. Arvan's Church, Chepstow**, which has been reopened for divine service, is lighted by Hesperus and Duplex Lamps, the gift of a gentleman connected with the parish. These, in addition to a brass lectern, were supplied by Messrs. Jones & Willis.

**Mr. S. B. Burton**, Newcastle-on-Tyne, has just completed the roofing of the following churches for Mr. C. Hodgson Fowler, architect, of Durham:—Stillingfleet, near York; Hebburn Colliery Company Church, near Durham; and Broadway Church, near Worcester. They were covered by the Hartshill Brick and Tile Company with their red roofing tiles, the tiles for the roof of Broadway Church being strawberry coloured.

**Messrs. Woodhouse & Rawson**, of Queen Victoria Street, have been awarded a diploma of honour for their incandescent lamps exhibited at the Fisheries Exhibition.

**The Walls of the Central Technical Institute**, South Kensington, throughout the entire buildings, are being decorated with "Orr's Durescò," as manufactured by Messrs. J. B. Orr & Co., of Charlton, S.E.

**Messrs. C. C. Dunkerley & Co.**, of Manchester, who have just completed the girder contracts for the Olive Spinning Company (Limited), Oldham, and the Duke Spinning Company (Limited), Shaw, near Oldham, have, we learn, secured the contracts for the girders for the Fern Spinning Company (Limited), Shaw, near Oldham, and Patricroft Spinning Company (Limited), Patricroft, near Manchester.

**The Red Bricks** for Messrs. Holland's new premises in Oxford Street were supplied by the firm of Messrs. Thomas Lawrence & Son, brick and tile manufacturers, &c., of Bracknell. The gauged and moulded and carved brickwork is of first-class workmanship. Messrs. Lawrence are at present again enlarging their works for the coming season.

## CHURCH BUILDING AND RESTORATION.

**Newcastle-on-Tyne**.—St. James's Congregational Church, Bath Road, which has been built in place of the small church at the corner of Grainger Street and Blakett Street, has been opened. The new church and schoolroom, &c., have been erected by Mr. Walter Scott, contractor, from designs prepared by Mr. T. Lewis Banks, Finsbury Circus, London, and the cost of the site, buildings, furnishing, &c., has been 16,500*l*.

**Burton-on-Trent**.—The blank space under the window of the north transept of St. Paul's Church has, at the cost of Mr. Bass, been filled in with a wall arcading of three arches, subdivided into six panels, and carried upon polished and selected Irish marble shafts separated by carved crockets and ball flowers. The mouldings of the arches, &c., are deeply cut under, and enriched with ball flowers, the whole surmounted by a second arcading of narrow niches. The work has been carried out by Mr. H. D. Kershaw, from the designs of Mr. R. Churchill, architect. The carving was executed by Mr. J. Roddis, of Birmingham.

**Llanfechain**.—The ancient parish church of Llanfechain has been reopened after restoration. The work has been done by Mr. David Edwards, contractor, of Llanfechain, the architect being Mr. Douglas, of Chester, and Mr. Muspratt clerk of works. The oak-work in the chancel, screen, seats, and lectern has been done by Messrs. W. & G. Thomas, of Oswestry. The painting of the *Nativity* between the windows over the altar has been executed by Mr. E. Frampton, of London.

## NEW BUILDINGS.

**Tiverton**.—The new Drill Hall and Public Hall erected at Tiverton, from the designs of Mr. Mitchell, architect, of Southampton, has been opened. The tender of Messrs. Manning & Deering, of Tiverton, was originally accepted for the erection of the building at 1,572*l*. Additions subsequently made increase the cost to 2,000*l*, making the total outlay about 3,000*l*. The premises comprise a spacious hall, 80 feet by 50 feet, the ceiling of which is 40 feet high at the apex, and the walls 20 feet. In addition to the main entrance there is a side door. The hall is also provided with two "panic" doors, to enable a crowded house to clear in less than two minutes in case of emergency. A double floor has been laid down, the under one permanently fixed being intended for dancing purposes, and an upper one for general use, made in sections in order to be easily removed. At the southern end of the room is an alcove with platform 17 feet wide by 30 feet long. On either side are retiring-rooms 17 feet by 9 feet each. In front of the hall facing the road is the dwelling-house of the drill instructor, armoury, orderly-room, and suite of rooms used for a gentleman's club. The frontage of the building is of red brick, tuck pointed, with Bath stone dressings.

## ARCHÆOLOGY.

**The Colchester Museum**.—Mr. J. E. Price, F.S.A., has arranged and prepared a catalogue of the Roman and Mediæval antiquities in this museum. The collection is now, for the first time, classified and scientifically arranged, so that instead of a mere gathering of independent specimens of greater or less interest, it becomes a museum in which Roman art and Roman history can be studied with a completeness that cannot often be attained. The collection has an almost world-wide fame, and had it but been possible in past years for the Colchester Museum to have acquired all the remains of Roman Colchester that unorganised excavation has brought to light, it would be unrivalled. Mr. Price's catalogue is not a mere inventory. He has carefully described all the specimens, and where any special interest attaches to them, has introduced historical notices of the class of objects to which they belong, illustrating these notices by reference to other objects of similar kind, and giving sketches and engravings in corroboration of his remarks. The catalogue may almost be called a history in itself of Roman arts and manufactures. It is to be hoped that the result of so much labour—labour of love it must have been, but still labour of no ordinary kind—will not be allowed to remain in MS. in the comparative seclusion of the Colchester Museum. Mr. Price has expressed an intention of elaborating this catalogue into an exhaustive work upon Roman Colchester, dealing with the history and fortunes of the colony from the time of its first foundation down to its final abandonment. Mr. Alma Tadema, R.A., has recently paid a visit to Colchester, inspecting the Town Museum as well as the private collection of Mr. George Joslin, with the object of selecting specimens of Roman pottery for introduction into a forthcoming picture. One of Mr. Alma Tadema's pupils has been engaged for the last month in making beautiful drawings of the Colchester urn, and also of another specimen given to the museum by Monsignor Virtue.

## GENERAL.

**Mr. H. S. Marks, R.A.**, has been "specially elected" by the committee as a member of the Athenæum Club.

**Mr. William Agnew, M.P.**, has presented to the Manchester Art Museum Committee some pictures and casts, specially selected for the particular objects of the Art Museum.

**Messrs. Edbrooke & Burnham**, architects, of Chicago, are the successful competitors for the plan of the new Georgia capitol.

**Mr. J. Medland Taylor**, architect, of Manchester, has prepared plans for the erection of a tower and spire to Poynton Church, which will form a memorial of the late Lord Vernon.

**A Paper** on "Iron Construction" was read by Mr. N. R. Yeomans at the last meeting of the York Architectural Association.

**Messrs. Brown & Humphreys**, architects, of Luton, have dissolved partnership.

**The Normand Memorial Hall**, Dysart, is being erected from the designs of Mr. R. Rowand Anderson, A.R.S.A., Edinburgh. The foundation-stone was laid on Saturday last.

**Sunday-schools**, erected from the designs of Mr. G. D. Oliver, in West Tower Street, Carlisle, have been opened.

**Tenders** for the restoration of Sherborne Abbey Church tower are to be obtained from a few local builders only. Mr. R. H. Carpenter is the architect.

**Messrs. Preston & Vaughan**, of Manchester, have prepared plans for the erection of the Hope Memorial Schools and Mission Church, in connection with the parish of Christ Church, Heaton Norris.

**The Aberdeen Town Council** have authorised the execution of a contract with M. Severin Van Aerschodt, bellfounder, Louvain, for the supply of a peal of thirty-six bells for the tower of St. Nicholas' Church at a cost of 2,690*l*.

**The West Bromwich Town Council** on Wednesday agreed to apply for permission to borrow 53,100*l*. for the construction of a low-level intercepting sewer and subsidiary sewers.

**Pepys' Memorial**.—The result of the labours of the committee formed to consider the best means of obtaining a satisfactory memorial of Samuel Pepys, the diarist, is an appropriate monument, designed by Mr. A. W. Blomfield, which has been erected in the Church of St. Olave, Hart Street, E.C., where Pepys is buried. The monument will be unveiled by the Right Hon. the Earl of Northbrook, K.C.S.I., First Lord of the Admiralty, on Friday, the 14th inst., at 3 P.M., and His Lordship will be assisted on the occasion by His Excellency the United States Minister. We understand that the committee still require some more subscriptions.

**The Panama Canal Works** are, according to the report of the chief engineer, Mr. Dingler, being actively proceeded with on fourteen sections of the canal. Within the last few months four million cubic metres of earth have been removed. About eighty million cubic metres constitute the whole amount of earth to be got away before the canal is completed, and it is hoped that it will be finished in three and a half years.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MARCH 8, 1884.

### COMPETITIONS OPEN.

**HALIFAX.**—Plans are invited from Architects residing within the Borough for proposed large School in Akroyd Place. Mr. Robert Ostler, Clerk to the School Board, 22 Union Street, Halifax.

**NEWCASTLE-ON-TYNE.**—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

**WIDNES.**—March 20.—Designs are invited for Public Offices and Town Hall. Mr. J. T. Allen, Public Offices, Widnes.

### CONTRACTS OPEN.

**ABERDEEN.**—March 11.—For Works in Building Dairy, with Rooms attached. Messrs. Davidson & Garden, 7 Union Terrace, Aberdeen.

**ANDOVER.**—For Providing new Post-office. Mr. Charles Tredgold, Postmaster, Andover.

**BARNET.**—For Providing new Post-office. The Postmaster, Barnet.

**BATLEY CARR.**—March 8.—For Building Mill. Mr. Reuben Castle, Architect, Westgate, Cleckheaton.

**BELFAST.**—March 13.—For Sheds, &c., for Agricultural Show. Mr. W. Hastings, Engineer, Victoria Hall, Belfast.

**BELFAST.**—March 14.—For Alterations to White Abbey Church. Messrs. Young & Mackenzie, Architects, Donegall Square East, Belfast.

**BELFAST.**—March 15.—For Building Double Villa at Knock. Mr. W. Watt, Architect, 77 Victoria Street, Belfast.

**BISHOPPHILL.**—March 10.—For Building eight Houses. Messrs. Benson & Minks, Architects, 13 Spurriergate, York.

**BRACKLESHAM BAY.**—March 19.—For Construction of Sluice, Sluice Culverts, and Works in connection. Mr. A. S. Hamard, C.E., Palace Chambers, Bridge Street, Westminster.

**BOLDON COLLIERY.**—March 13.—For Building Fifty Workmen's Houses. Mr. George May, Harton Colliery Offices, South Shields.

**BRIERFIELD.**—March 14.—For Building Wesleyan Day and Sunday School. Messrs. Waddington & Son, Architects, 5 Grimshawe Street, Burnley.

**BRIGHOUSE.**—March 10.—For Reconstruction of Bridge and Extension of Platforms and Roofing. Plans at the Engineer's Office, Hunt's Bank, Manchester.

**BURTON-ON-TRENT.**—March 10.—For Extension of Girls' School. Messrs. Giles & Brookhouse, Architects, 9 St. James's Street, Derby.

**BURY.**—April 7.—For Removal of Heap Bridge over the River Roch, and Erection of Stone Bridge in lieu. Mr. W. Radford, Bridgemaster, 1 Princess Street, Manchester.

**CAISTOR.**—March 29.—For Works of Water Supply to Union. Mr. G. R. F. Haddelsey, Clerk to the Rural Sanitary Authority, Caistor.

**CALVERLEY.**—March 10.—For Works in Building Weaving Shed at Mill. Mr. Jowett Kendall, Architect, Idle.

**CHORLTON.**—March 14.—For Building Shed at Union Offices. Messrs. Mangnall & Littlewood, Architects, 29 Brown Street, Manchester.

**CHUDLEIGH.**—March 10.—For Building Residence. Mr. James Crocker, Architect, 25 Queen Street, Exeter.

**COUNTERTHORPE.**—March 17.—For Supply of Water Tanks, Boiler Piping, &c. Mr. Isaac Barradale, Architect, Grey Friars, Leicester.

**DROGHEDA.**—March 14.—For Works at St. Mary's Church. Mr. J. F. Fuller, Architect, 179 Great Brunswick Street, Dublin.

**EASINGTON.**—March 12.—For Additional Buildings to Workhouse. Mr. John Dote, Clerk to the Guardians, Easington.

**GLOUCESTER.**—March 10.—For Building Premises in Brunswick Road. Messrs. Searle & Hayes, Architects, 66 Ludgate Hill, E.C.

**HALIFAX.**—March 13.—For Building Dwelling-house in Foundry Street. Messrs. G. Buckley & Son, Architects, Waterhouse Street, Halifax.

**HALIFAX.**—March 20.—For Class-rooms, &c., to Northgate Chapel. Messrs. Petty & Ives, Architects, Waterhouse Street, Halifax.

**HARROGATE.**—For Building Two Houses, West Park. Messrs. Smith & Tweedale, Architects, 39 Park Square, Leeds.

**HASLINGDEN.**—March 10.—For Extension of Wesleyan Chapel. Messrs. Waddington & Son, Architects, 5 Grimshawe Street, Burnley.

**LINCOLN.**—March 15.—For Building Grammar School, Upper Lindum Road. Mr. W. Watkins, Architect, St. Edmond's Chambers, Lincoln.

**LLANTRISANT.**—March 15.—For Building Baptist Chapel and Vestry, Pontydown. Mr. Charles Highton, Great Western Cottages, Llantrissant.

**LOSSIEMOUTH.**—March 15.—For Works in Building Public Hall. Mr. D. Cameron, Architect, Inverness.

**MENAI BRIDGE.**—March 12.—For Building Welsh Baptist Chapel. Mr. R. G. Thomas, Architect, Menai Bridge.

**MIRFIELD.**—March 26.—For Building Warehouse, Willey Rooms, Tenter Stoves, &c. Messrs. Kirk & Sons, Architects, Dewsbury.

**NELSON.**—March 10.—For Building Three Houses. Mr. Thomas Dean, Architect, 21 Nicholas Street, Burnley.

**NELSON.**—March 13.—For Building Congregational Chapel. Mr. George Fell, Architect, Spring Gardens, Manchester.

**NEWPORT.**—March 13.—For Erection of Gasworks. The Engineer, Gas Offices, Mill Street, Newport, Mon.

**NORTH BERWICK.**—March 17.—For Works in connection with Water Supply. Messrs. Leslie & Reid, 72a George Street, Edinburgh.

**NORTH UIST, INVERNESS.**—March 15.—For Erection of Three Schools and Teachers' Residences at Loch Effort, Claddach, Kirkibost, and Boveray. Mr. D. Dott, Bank, Lochmaddy.

**NOTTINGHAM.**—For Building Public House and Two Shops. Mr. Herbert Walker, Architect, Newcastle Chambers, Angel Row, Nottingham.

**PLUMSTEAD COMMON.**—March 21.—For Boundary Walls to Cemetery, Iron Fencing and Entrance Gates, Caretaker's Lodge, Workmen's Sheds, &c. Mr. H. D. Church, Architect, William Street, Woolwich.

**PONTLOTTYN.**—March 15.—For Building Baptist Chapel and School. Rev. I. Cool, Pontlotty, Cardiff.

**PORTREE.**—March 15.—For Furnishing Sixty Tons of Cast-iron Pipes, from 5 to 3 inches diameter, with Branches Valves, &c., and Opening and Refilling about 4,000 yards of Pipe Trenches, and Laying and Jointing Pipes, with Valves, Fire-plugs, &c. Mr. James Fraser, C.E., Inverness.

**SHARNBROOK.**—March 18.—For Building House at Sharnbrook, Bedford. Messrs. John Ingham & Sons, Architects, Hazelwood Road, Northampton.

**SOUTHAMPTON.**—March 25.—For Building an Oddfellows' Hall at Hythe. Mr. D. Davy, Cadland, Southampton.

**ST. BEES.**—March 10.—For Building House. Mr. William Scott, St. Bees.

**ST. LEONARDS-ON-SEA.**—March 17.—For Building Two Dwelling-houses with Shop Fronts and Warehouses. Mr. P. H. Ellis, Hollington, Sussex.

**STAINES.**—March 17.—For Building Hospital for Infectious Diseases. Mr. H. W. Pratt, Architect, 3 Farnival's Inn, Holborn, E.C.

## MANUFACTURERS AND IMPORTERS OF MARBLE AND WOOD CHIMNEY PIECES.

QUEEN ANNE

ELIZABETHAN

AND  
RENAISSANCE

GRATES

STOVE GRATES

KITCHEN RANGES

FENDERS

AND  
RAILING

MANTELS

OVER MANTELS

ART TILES

AND  
HEARTHES

STOVE GRATE MANUFACTURERS AND IRONFOUNDERS,

# GEORGE WRIGHT & Co.

SHOW-ROOMS:

155 QUEEN VICTORIA STREET

And 238 Upper Thames Street, Blackfriars, E.C. — WORKS, ROTHERHAM.



STALHAM.—March 10.—For Building Baptist Chapel and School. Mr. G. Baker, 28 Queen's Road, Yarmouth.

STALYBRIDGE.—March 17.—For Extensions to Central Stores, Grosvenor Street. Messrs. J. Lawton & Son, Architects, St. Chad's, Uppermill, Saddleworth.

ULVERSTON.—March 8.—For Enlarging National Schools Mr. J. W. Grundy, Architect, Brogden Street, Ulverston.

WANSTEAD.—March 17.—For Additions to Caen Hall Lane Schools. Mr. J. T. Bressey, Architect, 70 and 71 Bishopsgate Street Within, E.C.

WEST BROMWICH.—March 10.—For Building Board Schools at Black Lake, for 1,060 children. Mr. E. Pincher, Architect, 274 High Street, West Bromwich.

WHITCHURCH.—March 15.—For Building House. Mr. John Hillary, Longparish, Hants.

WHITWORTH.—March 12.—For Building three Houses and Stable at Facit. Mr. T. Holt, Architect, Market Street, Whitworth.

YEOVIL.—March 25.—For Erection of Public Baths. Mr. J. Johnson, Architect, 9 Queen Victoria Street, E.C.

## TENDERS.

### BELFAST.

For Building House and Premises, Antrim Road, Belfast, for Mr. P. Leonard. Mr. EDWARD J. BYRNE, Architect, Belfast. Quantities by the Architect.

McElean	£950 0 0
Fulton	930 0 0
Kern	927 0 0
Campbell & Lowry	920 0 0
Kidd	907 0 0
Murdoch	837 0 0
Collins	810 0 0
ROONEY & MOONEY (accepted)	755 0 0
Macaulay	696 0 0

### BEXLEY HEATH.

For the Erection of a Block of Workmen's Dwellings at Upper Bexley North Crag, for Mr. H. Jackson. Mr. WM. THEOBALDS, Architect.

Staines	£1,094 0 0
Stebbing	1,089 11 0
Knight	1,067 0 0
Wright	950 0 0
LASLETT (accepted)	865 0 0

### BRIDLINGTON QUAY.

For Erection of Parish Room, Christ Church, Bridlington Quay. Mr. J. EARNSHAW, Architect, Bridlington Quay.

Rennard	£652 6 8
Gray	630 0 0
Leeson	579 0 0
Mainprize	575 0 0

### BRIGHOUSE.

For the Erection of Four Houses on Camm's Estate, off Old Lane, Brighouse, Yorkshire, for Mr. James Beaumont. Mr. R. F. ROGERSON, Architect, Brighouse.

#### Masons.

J. Bottomley, Brighouse	£393 0 0
Crossley, Hove Edge	385 10 0
Hill, Rastrick	385 0 0
Crowther, Rastrick	385 0 0
Empsall, Brighouse	378 0 0
Fearnley, Brighouse	362 0 0
T. Bottomley, Brighouse	355 0 0
CROSS & SON, Brighouse (accepted)	315 0 0

#### Joiners.

Halliwell, Brighouse	165 4 0
Wadsworth, Southowram	149 10 0
Bentley, Rastrick	149 0 0
Crowther, Brighouse	147 0 0
Speight, Scholes	146 0 0
Sykes & Sons, Brighouse	139 0 0
Wright, Brighouse	135 0 0
Robinson, Brighouse	133 0 0
RAYNER, Rastrick (accepted)	130 0 0

#### Plumbers.

Lawson, Brighouse	20 13 0
Shaw, Rastrick	20 10 0
WOOD, Brighouse (accepted)	18 18 0

#### Slaters.

Rushworth & Firth, Halifax	61 10 0
Firth Bros., Brighouse	53 5 0
Shaw, Mirfield	50 0 0
SMITHIES, Bradford (accepted)	47 0 0

#### Plasterers.

Anderson & Hynes, Brighouse	32 0 0
Wood, Brighouse	30 10 0
Heponstall, Brighouse	30 0 0
Shaw, Mirfield	30 0 0
Clarke, Rastrick	28 11 0
Firth Bros., Brighouse	27 10 0
GLADHILL & BARNACLOUGH, Brighouse (accepted)	23 0 0
Rushworth & Firth, Halifax	20 10 0

#### Whitesmiths.

Denham & Booth, Brighouse	28 0 0
Booth & Marsden, Brighouse	26 0 0
Beckwith Bros., Brighouse	24 18 0

#### Painters.

Smith, Brighouse	9 10 0
Hirst & Barracough, Brighouse	9 5 0
Marshall & Oldfield, Rastrick	7 10 0
TURNER, Brighouse (accepted)	6 0 0

### BLACKHEATH.

For the Erection of New Schools and Vestries, Wesleyan Church, Blackheath. Messrs. DUNK & GEDEN, Architects, 36 and 37 Leadenhall Street, E.C.

Otway	£3,042 0 0
Dobson	2,980 0 0
Lawrance & Sons	2,818 0 0
Rider & Son	2,818 0 0
Smith & Sons	2,735 0 0
Outhwaite	2,694 0 0
Morter	2,687 0 0
Staines & Son	2,672 0 3
Greenwood	2,669 0 0
Jerrard	2,627 0 0
Chafen	2,556 0 0
Grubb	2,470 0 0
Tongue	2,450 0 0
KENNARD BROS. (accepted)	2,263 0 0

### CARDIFF.

For Building Fifty-seven Cottages at Cathays, for the Cardiff Railway Workmen's Cottage Co., Limited. Mr. J. P. JONES, Architect, 26 Park Street, Cardiff. Quantities by the Architect.

Shepton	£12,050 0 0
Shepherd	11,619 0 0
Clarke	11,200 0 0
Gough	10,150 0 0
Symonds	9,690 0 0
Purnell & Fry	9,519 0 0
Davies	9,500 0 0
Green	9,450 0 0
Battye & Thomas	9,386 0 0
Walters	9,245 0 0
Smith	8,998 0 0
Brown	8,806 0 0
Thomas & James	8,720 0 0
DAVIES (accepted)	8,500 0 0
Cox	7,000 0 0

For Formation of Roads, Sewers, &c., at Canton, Cardiff, for the Glamorgan Workmen's Cottage Company. Messrs. JAMES, SEWARD & THOMAS, Surveyors.

Thomas	£694 13 0
Day	681 0 0
Jepson Bros.	630 0 0
Pearson	629 19 0
Smith	584 12 7
Green	573 1 6
Rees	503 5 0

### COUNTESTHORPE.

For Gas-piping and Gas-fittings to Five Cottages and Superintendent's Residence, and to Five Cottages, Schools, and Workshops, Countesthorpe, for the Leicester Union.

Pearce, Leicester	£154 15 0
Coleman, Leicester	154 10 6
Goodman, Leicester	154 8 0
Cort & Paul, Leicester	133 18 0
Porter, Leicester	131 8 0
Smith, Leicester	118 15 0
Hurley, Lutterworth	115 10 3
ADAMS, Narboro' (accepted)	110 3 0

### CURTISDEN GREEN.

For Additional Buildings to Boys' School, Curtisden Green, Kent, for Rev. J. J. Kendow. Mr. WM. THEOBALDS, Architect.

MARTIN (accepted).  
No competition.

### DOVER.

For Building Infirmary at the Workhouse, Buckland, Dover. Messrs. TREVOR & CRESSWELL, Architects. Quantities by the Architects.

Sergeant & Trotman, Bekebourne	£5,500 0 0
Brooks, Folkestone	5,000 0 0
Welch, Dover	4,350 0 0
Bull, Son & Co., Southampton	4,107 0 0
Jackson, Dover	4,100 0 0
Chamberlain, Dover	4,099 0 0
Austin & Lewis, Dover	4,070 0 0
Adcock, Dover	4,025 0 0
Lewis & Chandler, Dover	4,000 0 0
Wiles, Dover	3,889 0 0
Richardson, Dover	3,949 0 0
Denne & Son, Deal	3,875 0 0
Dowle, Dover	3,786 0 0
Bromley, Dover	3,730 0 0
Lewis, Dover	3,717 0 0
STIFF, Dover (accepted)	3,685 0 0

### EASTBOURNE.

For Building Stabling for Sixty Horses, with Carriage Accommodation, Eastbourne, for Mr. S. H. Weston. Mr. OLIVER MITCHELL, Architect, Eastbourne. Quantities by the Architect.

Cornwell & Son	£5,050 0 0
Hurst	4,684 0 0
Dore & Sons	4,477 0 0
Peerless	4,213 0 0
LONGLEY (accepted)	4,095 0 0
Hudson, Kearley & Co.	3,550 0 0

### ECCELSFIELD.

For Building School to accommodate 350 Children, at Burncross, for the Ecclesfield School Board. HOLMES, Sheffield (accepted).

HOLMES, Sheffield (accepted)	£2,402 6 0
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### GOUDHURST.

For Extension of Ladies' College, Goudhurst, Kent, for the Rev. J. J. Kendow. Mr. WM. THEOBALDS, Architect.

Marshall & Son	£617 0 0
Tully	520 0 0
MARTIN, * Horsmonden (accepted)	516 0 0
Davis & Leary	489 18 6
* Having carried out Contracts Nos. 1 and 2.	

### GREAT BERKHAMPTSTEAD.

For Additions to Cross Oak, Great Berkhamptstead, Herts, for Colonel Hanbury Barclay. Mr. FRANK E. THICKE, Architect. Quantities by Mr. H. C. Leite.

Hailey, Watford	£507 0 0
Matthews, Berkhamptstead	455 0 0
Henderson, Highbury	429 10 0

### HENDON.

For Building Shops in Brent Street, Hendon (First Contract). Mr. BANISTER FLETCHER, Architect. ELLACOTT (accepted).

ELLACOTT (accepted)	£1,450 0 0
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### INVERNESS.

For the various Works of Villas to be erected in Ardross Street, Inverness. Mr. A. ROSS, Architect, Inverness.

#### Accepted Tenders.

M'Kenzie, mason	£500 0 0
Fraser, carpenter	467 10 0
Gallis, plasterer	144 19 6
M'Kay & M'Lean, plumber	140 10 0
Reed, slater	55 0 0
Tulloch, painter	51 17 0

### LEITH.

For Construction of Sewer in the Road from Seafeld Baths to Restalrig Road, Leith, N.B. Mr. W. BEATSON, Borough Surveyor.

Clow, Edinburgh	£1,178 6 10
Beatson & Dobie, Glasgow	716 15 1
Duncan, Leith	659 10 6
J. W. & G. Stratton, Edinburgh	624 2 5
Anderson, Leith	613 0 0
Bowden, Edinburgh	604 1 10
SHAW, Leith (accepted)	602 13 3

### LONDON.

For Alterations and Repairs at 61 Oakley Square. LANGMEAD & WAY (accepted).  
No Competition.

For Alterations for Mr. Josephs, at Newington Butts. Mr. BANISTER FLETCHER, Architect.

Rice	£427 0 0
Cock	420 0 0
Young	414 0 0

For Warehouse, Nos. 5 & 7 Peacock Street, S.E., for Mr. Henry Soden. Mr. BANISTER FLETCHER, Architect.

Young	£721 10 0
Downs	635 0 0
BURMAN & SONS (accepted)	626 0 0

For Enlargement of Board School, Webb Street, Bermondsey. Mr. E. R. ROBSON, Architect.

Falkner	£4,313 0 0
F. & F. J. Wood	4,193 0 0
Hart	4,072 0 0
Staines & Son	3,996 0 0
Johnson	3,826 0 0
Tongue	3,803 0 0
Patman & Fotheringham	3,789 0 0
Kirk & Randall	3,750 0 0
Brass	3,735 0 0
Bangs & Co.	3,730 0 0
Turtle & Appleton	3,726 0 0
Niblett	3,718 0 0
Smith & Sons	3,707 0 0
Shurmur	3,694 0 0
Jerrard	3,690 0 0
Holloway	3,677 0 0
Atherton & Latta	3,650 0 0
Scrivener & Co.	3,644 0 0
Lathey Bros.	3,634 0 0
Grover	3,626 0 0
Jackson & Todd	3,620 0 0
Downs	3,620 0 0
Shepherd	3,598 0 0
Wall Bros.	3,587 0 0
Stimpson & Co.	3,480 0 0
Howell & Son	3,462 0 0

### LONG EATON.

For Building Ten Dwelling-houses and Shop, with Out-buildings, Drains, Fence Walling, &c., in Bridge Street, Long Eaton. Mr. JOHN SHELTON, Architect, Long Eaton.

Poxon & Rice, Long Eaton	£1,674 0 0
Wheatley & Maule, Nottingham	1,660 0 0
Perks, Long Eaton	1,650 0 0
Dight, Long Eaton	1,642 0 0
J. & L. Bull, Long Eaton	1,610 0 0
Brown, Long Eaton	1,553 0 0
Doncaster, Long Eaton	1,550 0 0
Bramley & Nipper, Kegworth	1,529 0 0
STONE, Long Eaton (accepted)	1,500 0 0

For Building Nine Dwelling-houses and Shop, &c., in King and Prince Streets, Long Eaton. Mr. JOHN SHELTON, Architect, Long Eaton.

Perks, Long Eaton	£1,669 0 0
Fullalove, Long Eaton	1,581 0 0
Dight & Rose, Long Eaton	1,481 0 0
J. & L. Bull, Long Eaton	1,443 0 0
Doncaster, Long Eaton	1,432 0 0
Bramley & Pepper, Kegworth	1,395 0 0
WHEATLEY & MAULE, Nottingham (accepted)	1,335 0 0

### LOCHGILPHEAD.

For Erection of Church at Lochgilphead. Mr. J. HONEYMAN, Architect, Glasgow.

#### Accepted Tenders.

W. & J. Robertson, West Kilbride, mason	£946 1 10
Smellie, Partick, joiner	521 6 0
Smellie, Partick, plasterer	30 0 0
Darrie, Glasgow, slater	66 10 8
Morrison, Ardirlshaig, plumber	26 6 6

Total £1,590 5 0  
The highest offers made a total of £2,345 8s. 10d.



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For Laying Iron Mains for Water Supply, Marlow.  
YOUNG & CO., Pimlico (accepted) . . . £1,500 0 0

NEWQUAY.

For Road-making and Fencing for Entrance Drive to Glendall and Porth-Voor, for Messrs. Richard Tangye and W. Stephens, St. Columb-Minor. Mr. SYLVANUS TREVAILL, Architect, Truro.

Rowe & Gilbert, St. Columb-Minor . . . £210 0 0  
Pearce, St. Columb-Minor . . . 210 0 0  
Knight, Roche . . . 199 0 0  
THORPE, Tywardreath (accepted) . . . 197 0 0  
James, Newquay . . . 195 0 0  
Arthur, St. Stephens (incomplete).

NORTH TYNE.

For Restoration of Birtley Church, North Tyne (Contract No. 2), for the Rev. Geo. Rome Hall, F.S.A. Mr. ARTHUR B. PLUMMER, A.R.I.B.A., Architect and Surveyor, 46 Cloth Market, Newcastle-on-Tyne.

Robson & Tremble, Hetton . . . £724 0 0  
Martinson, Corbridge . . . 690 0 0  
Milburn & Gibson, Benfieldside . . . 638 9 0  
WELTON, Mollow Burn, Wark (accepted) . . . 633 9 0

Carpenter Work.

Adamson & Son, Shildon . . . 356 5 0  
Graydon & Son, Durham . . . 286 11 6

Mason Work.

J. & W. Bell, Bellingham . . . 294 0 0  
Welton, Mollow Burn . . . 225 13 0

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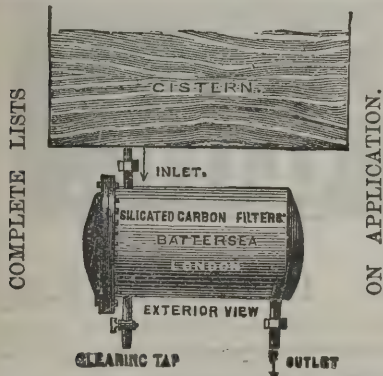
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Proctor, Woolwich . . . 2,200 0 0  
Hosking, Stratford . . . 2,086 0 0  
Oldrige, Colchester . . . 2,049 0 0  
Redman, Brockley . . . 1,997 0 0  
Dobson, Colchester . . . 1,980 0 0  
Dupont, Colchester . . . 1,953 0 0  
Coombs, Plumstead . . . 1,950 0 0  
Avar, Maidstone . . . 1,914 0 0  
D. & A. Brown, London . . . 1,889 0 0  
Pyle & Co., London . . . 1,820 0 0  
Loneragan, Plumstead . . . 1,813 0 0  
JOHNSON, Woolwich (accepted) . . . 1,750 0 0  
Harriss, Woolwich . . . 1,748 0 0  
Watson, Dulwich . . . 1,725 0 0  
Forsdyke, Plumstead . . . 1,634 5 6

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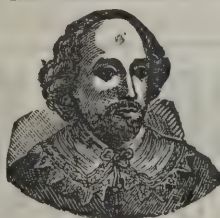
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# The Architect.

## MR. SHAW-LEFEVRE ON LONDON.



THE present First Commissioner of Works has proved himself on many occasions to be exceptionally well qualified for the important office he happens to hold; and when we speak of the office he *happens* to hold, we imply even an augmented admiration of the way in which he performs its work. Mr. SHAW-LEFEVRE has, in short, strikingly distinguished himself from his predecessors of as long a time as one can well remember, by manifesting, not only in a special degree the qualities of a clever man of business,

but almost equally those of a man of what is called good taste. In the Parliamentary system which on the whole suits us so exceedingly well that no one nowadays ventures, except in one or another form of jesting, to acknowledge a passing thought to its prejudice, there is one principle of practice which seems to be universally recognised, namely, that every enterprise connected with the Government shall have at its head, not nominally but really, a Parliamentary debater. Even when at this moment there is one M.P. in the seat of the Lord Mayor and another in the chair of the Metropolitan Board of Works, although it may be said that accident has a good deal to do with such a coincidence, yet every one must recognise in it an instance of the fitness of things; and when it has been argued, as it often has, that the architectural work of the Government, as a most exceptional duty, ought to be placed under the control of some sort of professional expert, not only has the practice been continued of preferring a Parliamentary administrator, but, when such a one could haply be found who was also acquainted with architecture, or any other art, if only as an amateur, the preference has still always been given to the possessor of no such qualification. Matters are changing a little now, but the rule has generally been to call a country gentleman to the office, literally in his capacity of a country gentleman; and, if Mr. SHAW-LEFEVRE is a man of business and a man of a little taste, it is not too much to say that it is still only as the equivalent of a country gentleman that he is generally supposed to have been appointed; indeed we should not be at all surprised to be told that, like Mr. AYRTON (who, by the way, was not a country gentleman, and therefore a failure) he had received his appointment with the frank remark that he could only recognise, as a reason for its bestowal, the fact that he had no personal knowledge of its subject. But be all this as it may, we see in Mr. SHAW-LEFEVRE very much what, under such a system, we ought to desire to see—a working politician whose mind is large enough, his courage earnest enough, and his general culture sufficiently liberal, to admit of his undertaking whatever artistic enterprise comes, amongst the rest, in his way, with that intelligent and painstaking confidence which, if in unfavourable circumstances it is the surest road to failure, is the surest road to success when guided by sound sense and loyalty to the cause. The other day we found a provincial enthusiast sending an invitation with authority to Mr. HERBERT SPENCER, to accept, as we may say, a seat in the House of Commons; an invitation which the philosopher very properly declined to entertain. Suppose some similarly ardent and influential leader were to ask, on popular artistic grounds—which are quite as good as the popular philosophical, if not better—Mr. RUSKIN or Mr. WILLIAM MORRIS, Mr. FERGUSSON or Mr. President JONES, to claim the post of M.P., for the sake of the First Commissionership of Her Majesty's Works; we feel sure we are saying quite enough to secure general approval if we remark that we would very much rather have Mr. SHAW-LEFEVRE than either of them, or all together. We may perhaps put the case thus:—that English public opinion, taking it as it stands, is clearly in favour of the supreme control of public works being in the hands of an unprofessional, and therefore unsophisticated, but experienced public man, who has the good sense to take private advice where it is to be had of the best quality, and the self-reliance to assume the responsibility of

acting upon it to the best of his own rough and ready judgment as a man of business and nothing more.

Mr. SHAW-LEFEVRE says a wise thing when he announces that he loves and admires London, and, indeed, never feels quite happy when out of it. There is a popular affectation which is always expressing itself in contempt of London. It is a fine thing to be glad to get out of it, away from its fogs and mud, "anywhere, anywhere out of the world" that one has to live in. It is the very same sort of fine thing to try to live up to some one else's century instead of one's own nineteenth. It is the same thing again to strive after an ideal life, as so many do, or pretend to do, hating the substantial flesh with such a cold, dull hatred, and loving the ethereal spirit with such a warm and pungent love. The true regulation hatred of London is singularly uncompromising and unreserved; people of the right sort hate its streets and squares, its centre and suburbs, its houses outside and its houses inside and its public statues more than anything else—except its public buildings, which are shocking. Even Mr. SHAW-LEFEVRE betrays unconsciously the fact that his love of London is not wholly free from this habit of superficial cynicism. "He did not know," says one of the newspaper reports, "whether the work of modern times was so good or excellent that one would feel inclined to do much in the way of additions, but at all events one could do but little harm in the way of destruction." We prefer to suppose here, either that the speaker did not think what he was saying, or that his oratory got a little confused in the way that confuses even the best of reporters; but if so liberal-minded a representative of the Government, now that we have at last got him, is really inclined to give way so far, in spite of all other liberality of feeling, as to entertain the absurd idea that the modern artistic work of London is wholly bad, we beg to ask him to reflect for a moment. There is absolutely no branch of discovery or invention, of knowledge or of skill, in which Englishmen of the present very remarkable age are not acknowledged by the best foreign opinion to be able to place themselves in the very foremost rank of merit; and architecture is certainly one department in which, beyond all dispute, Englishmen, during the last fifty years, under conditions frequently most unfavourable, have done their duty to the utmost. It is not enough to express a vague admiration for the Tower and St. Paul's, the Abbey and Westminster Hall. BARRY'S Palace of the Legislature is the admiration of the world. The Bank of England, Somerset House, the British Museum, University College, the National Gallery itself, the club-houses, and hundreds of municipal, ecclesiastical, and domestic buildings all over the town, can hold their own, in one respect or another, in comparison with the corresponding edifices of any other capital whatever; while the new churches of England, London included, taken as a whole and from their own point of view, constitute perhaps the most excellent development of building art in all history, having regard to the short period of time which has created them, and the peculiar characteristics of national temperament which they represent. "If it be true," said Mr. LEFEVRE again (as suggested by the lecturer of the evening, Mr. HARRISON), "that Londoners feel a sense of weariness and gloom when they regard London, it is because they do not know London, and will not raise their eyes to see what is daily before them." "London," he added, "as a whole, is one of the most beautiful cities, if not the most beautiful, in Europe." Here he speaks (to use a very common but significant phrase) as a sensible man. He is not alone in his opinion, either at home or abroad. London has many faults, but so have other towns wherever they may be; and we do not hesitate to say that if the Legislature, in some particularly lucid interval, were to happen to give Mr. SHAW-LEFEVRE what is called a little latitude, there are many of the faults of London which, under good advice, he might soon see his way to remove without so much trouble as might be expected.

One practical reflection in which we may take leave to indulge is that it might be well for the Government to consider, in their new municipal projects for the metropolis, whether the time has not arrived for the institution of a Ministry of Metropolitan Building. That the structural prementment of the capital city of a great empire is a subject of serious national importance is a principle which ought by this time to be publicly recognised in England as it is elsewhere. Especially when it is becoming a life-struggle with us to compete with other nations in the arts of industrial taste ought this to be taken into grave consideration. It is not that we



need showy buildings and costly ornamentation ; but the calm utilitarian repose of stately grace must not be disregarded as it has been. If anything is to be done in this direction, it will never be by the action of local "ratepayers," but by the generous forces of national enterprise. London is not the mere town of the Londoners ; it is the heart and soul of England, and the joy of all English-speaking peoples, and it ought to be so cherished. To speak perhaps a little too plainly, let us say that, without wishing to see a Mr. SHAW-LEFEVRE taking the place of the Lord Mayor, we should be glad to see him charged with the administration of the architectural and artistic improvement of the metropolis, in the proper interest of the nation at large.

## THE ASSESSOR AND PUBLIC COMPETITIONS.

OUR readers will remember, that in May 1880 the late Mr. STREET presented a memorial to the President and Council of the Royal Institute of British Architects on the subject of public architectural competitions. This memorial was signed by some fourteen hundred architects, and excited a good deal of attention at the time, besides, in our opinion, affecting a large measure of reform. The words of the memorial ran thus :—

We, the undersigned Fellows and Associates of the Royal Institute of British Architects, being fully convinced of the unsatisfactory state of public architectural competitions as at present conducted, beg respectfully to bring the subject before the Council of the Institute for consideration.

Your memorialists are of opinion that this question can most successfully be dealt with in the interest of the whole profession by the Institute, as representing so large a section of it, and they earnestly hope that the Council will be able to devise a remedy which, while insuring greater advantages to the public, will at the same time place the competition system on a more satisfactory basis.

Your memorialists are further of opinion that the necessities of the case call for united action on the part of the profession, and that the most effectual way of insuring this will be to devise some scheme whereby all members of the profession can agree not to take part in any public competition unless a professional adjudicator of established reputation is appointed, and to such a condition, if generally accepted, your memorialists are prepared to bind themselves.

And we, the undersigned architects, not being members of the above Society, are desirous to aid this reform in public competitions as set forth in the memorial, and we are willing to bind ourselves under a similar condition if generally accepted.

Since then a committee was appointed, on the nomination of Mr. PORTER, to go into the whole question of competitions. The result of their labours was the issue of a paper entitled, "Suggestions for the conduct of Architectural Competitions," which was adopted at a special meeting of the Institute, in place of the old set of rules hitherto in use. At the conclusion of the labours of this committee, a second one was appointed, whose particular business was to be the carrying out of the objects of the memorial presented by the late Mr. STREET. We publish in another part of our paper a copy of a circular and form attached, which has been sent to every architect practising in the United Kingdom.

Of the justice of the principle the advocates of this movement contend for we think there can be no doubt, namely, the professional assessor for all public architectural competitions ; and we venture to hope that every architect who has the interests of the profession at heart will join in procuring this measure of justice from the promoters of competitions. We are not sanguine enough to suppose that, an era of universal contentment will set in, and that from henceforth all jealousies will cease to exist, and impartial justice be administered ; but that such a scheme as is now before us, if generally supported, will conduce to a better selection of designs and to greater fairness to competitors we firmly believe. Let promoters once grasp the fact that architects will not send them in designs unless they guarantee that their labours shall be judged by competent men, thoroughly acquainted with the principles of design and practice, and they will not be slow to comply with so very modest a request. To grant it is to their own benefit, removing from themselves the slur—so often cast—of using favouritism, and also lessening considerably their responsibilities. It requires the nicest discrimination and the clearest judgment in deciding upon the rival merits of design, and appreciating

the niceties of plan and general arrangement. How can laymen decide with little or no experience to guide them ? The task of selection at best is not an easy one to carry out, and the argument is a sound one, that a specialist by lifelong study should be better able to say what is good, bad, or indifferent in the designs submitted, than a committee of laymen. Every one knows that many architects submit designs which are too often selected, because the drawings are got up for show and to take the eye, regardless of the amount to be spent ; laymen cannot decide upon such points, and so too often a modest design, honestly carrying out the instructions, is set on one side and a vulgar one chosen in its stead. Then comes the question of builders' estimates, often and often largely in excess of the advertised conditions ; then cutting down of essentials to maintain outside appearances, and universal recriminations on all sides. Now much of this might be spared, and the public would be the gainers, as well as all those architects who desire to act honourably and fairly.

The objection that some architects will feel to sign any such undertaking as we have now before us, is that by so doing they would be tying their own hands, and playing into those of men who do not sign, and who will be only too glad to stand on one side and see formidable rivals muzzled, while they were free to step in and compete with more chances of winning the prizes offered. Such an objection is a perfectly fair one to take, but it is one that the advocates of the movement have frequently heard. They urge, in reply, that to accomplish any useful reform some sacrifice is demanded ; that the number who signed the memorial, and the well-known names of so many of them, was sufficient proof of the interest felt in the question, and that it is a fair presumption that the memorialists, who are in honour bound now to fulfil their pledge, will be very largely supported by others, who before waited to see what results would follow, and that the list, when completed, will embrace all the best-known men in the profession. The Committee state in their circular, that part of their duty will be to acquaint promoters of competitions with the undertaking that has been entered into, and to forward a list of those supporting it. They consider that the effect of this will be that the promoters, looking down the long list of names, and seeing in it all or most of those who have distinguished themselves in the profession, and pledged to the condition named, will hesitate before they invite a competition among those who are not on the list—would recognise the force of circumstances and the justice of the position taken up by the signers. Granted that in a few cases promoters paid no regard to this protest, designs would of course be sent in, but the class of men who would compete would be hardly those a responsible committee would care to employ, and precisely the class of men who would be likely to submit designs that an assessor would reject.

In other words, we think no architect, competent in his work, upright, and desirous of seeing justice done to his fellows as well as to himself, will hesitate to throw in his lot with the memorialists. If a man is *not* competent, upright, and desirous of seeing justice done, he may be left alone ; his employment on any work is likely to do more in support of the professional assessor than perhaps his adhesion to the pledge.

If the profession will only recognise the importance of their position before the public, and combine to maintain it by all lawful and fair means, they have the solution of the whole problem in their hands, and by putting aside petty jealousies, by showing a bold front, and taking what little risk there is, a reform will be gained beneficial to all concerned.

On another occasion we shall state our views on the selection of the professional assessor and his duties.

## A JAPANESE WAREHOUSE.

THE amalgamation of city churches is no new experiment. Over three centuries ago it was tried in London, and in consequence St. Mary Axe, as a separate parish, ceased to exist. That good old chronicler, of whom London should be proud, the tailor JOHN STOW, described, for the enlightenment of his fellow citizens, how the change came about. "In St. Marie Street," he said, "ye had of old time a parish church, of St. Marie the Virgin, St. Ursula, and the Eleven Thousand Virgins, which church was commonly called St. Marie at the



Axe, of the sign of an axe, over against the east end thereof, or St. Marie Pellipar, of a plot of a ground on the north side thereof pertaining to the Skinners in London. This parish, about the year 1565, was united to the parish church of St. Andrew Undershaft, and so was St. Marie at the Axe suppressed and letten out to be a warehouse for a merchant." From that time the merchants have not lost their hold on St. Mary Axe, and it is of a warehouse—one devoted to Japanese goods—that we are now about to write. In the sixteenth century it is probable that the inhabitants of the street were without direct trade with the Japanese islands, for the Dutchmen in those days were jealous and seeking a monopoly. If a jar or a lacquered dish found its way to St. Mary Axe, we may be sure that toll had been levied on it for the benefit of the States-General. It took a long time to bring the products of Japan into repute among us. Half of the nineteenth century had elapsed before our insular prejudices could be overcome, and the artistic wealth of the craftsman be fully recognised. When one considers the esteem in which their work is now held in England, it seems incredible that in the International Exhibition of 1851, not a single square foot of space was appropriated to the Japanese. What is more extraordinary, the absence of so interesting a people excited no regret.

All the floors in the large red-brick warehouse of Messrs. ROTTMANN, STROME & Co., in St. Mary Axe, are packed with objects which have been made by Japanese fingers. Pottery, metal-work, embroidery, lacquer, wood-carving, printed fabrics are here stored, and the house is the source from whence have been derived many of those things which are seen in London and provincial shops, ranging from little jars which cost a penny or two and give pleasure to humble virtuosi, to the costly screens which can hardly be seen without being coveted. The visitor finds in one place bales of cotton which have been woven in Manchester mills and printed in Japan, then he comes across piles of paper lamps, and has to pick his way with care through legions of jars, every one of them being as carefully enveloped in straw as if it were made of an eggshell; here we have lacquered panels for cabinets, elsewhere wooden tiles daintily ornamented and so on.

But what seems to be most remarkable is the immense space which is occupied by the rolls of Japanese wall-paper. Everyone knows how much effect can be gained by the use of that paper as an element in the decoration of houses, and that it seems to be equally well adapted for filling the panels in a cabinet, for a dado, a frieze, or the covering of a ceiling. But it is only on seeing the cases in Messrs. ROTTMANN, STROME & Co.'s warehouse that the extent of the daily demand for the paper can be realised. If an equal number of rolls of ordinary room papers were seen in a warehouse for paperhangings the stock would be considered to be rather large. It is found that purchasers of the papers generally require additional pieces, and to provide for contingencies a sufficient quantity of every pattern is kept. Incredible as it may seem, Japanese papers are as much subject as English papers or carpets to the absurd rule by which what are called "last season's patterns" become depreciated in value, no matter how great may be their beauty. In consequence of the desire for novelties there is a constant change going on in the cases, and the new arrivals find the best places awaiting them. A roll of paper may be a work of art, suggestive only of delight, but from the time of its production until every scrap is fixed (and very small scraps are utilised), it is as much subject to prosaic economical laws as corn or molasses. There is, however, one reservation to be made. Public taste is variable, often prefers debased work, and gives the highest price for ugliness; but to the credit of the producers it must be said that among the 150 patterns of papers which are to be seen in this warehouse, there is not one which indicates by its tawdriness or vulgarity that it has been specially prepared with an eye to the market.

We may divide the papers into two classes, viz., those which are from Japanese designs, and those which are adaptations of European designs—ancient and modern. The thickness in which the paper can be made, and the richness of colour which can be imparted to it, fit it for imitations of Venetian and Spanish leather and textile fabrics of the Renaissance age. Many artists prefer these imitations. The examples in Messrs. ROTTMANN, STROME & Co.'s rooms prove the versatility of the Japanese. The Renaissance designers were not so careful about the accuracy of the fruits, flowers,

and other natural forms as their Eastern copyists, but the Japanese have entered into the spirit of the originals and have preserved the rotundity and lusciousness of the pomegranates, apples and grapes. When the difference in the character between the two styles is remembered, the feat is remarkable, and in one respect especially so. In some of the Renaissance examples dragons, serpents, and more or less fabulous things have been introduced. To the eye of a Japanese they could hardly appear otherwise than ridiculous, for his countrymen alone are competent to create a form corresponding with the type that the mind fancies. But as an artist he must have felt that one of his own chimeras or gorgons—although it might excite terror—would not be in keeping with the other details, and therefore he has been faithful to his pattern. It would be difficult to exaggerate the richness of some of those reproductions of old Spanish, Italian, and Dutch designs. Attempts have been made to copy the originals before now, but the thick leathery paper of Japan is the only material that will bear the necessary depth of colour or allow of sufficient relief. The patterns vary from figures that are geometrical up to elaborate ornament that recalls the tissues painted by VERONESE; the richer varieties being better worth the trouble of producing in the material form the majority of the pieces.

The second class of papers includes all the designs which are Japanese, and it is interesting to compare them with those which are derived from Renaissance work. The latter are very rich and beautiful, but they are quickly exhausted; for the ornamentation of Europe at the time the originals were designed was limited in its variety. It may be said that almost every pattern that comes from Tokio surprises the beholder by its novelty. No matter whether it is an arrangement of a simple fret pattern, or of flowers, of serpents and dragons, or of Buddhist saints in all the glory of nimbi, there is a naïveté about the design which is unattainable by an artist who has undergone an European training. The laws by which the positions of the details of one of these patterns are fixed are not to be discovered by our academic rules. The Japanese artist probably obeys the inspiration of the moment; but however artlessly he may seem to work, it would be impossible for us with all our regularity to produce a better result. It has been sometimes said that the best examples of the art of Japan are those which are on a small scale, but whatever truth there may be in the observation, the details of the wall-papers should convince every one that the artists are as successful in designs which require great vigour of hand as they are in little things. In one pattern where stalks of grass, which are as large as nature, are thrown across the paper, the curves are as beautiful as any which can be found on the tiniest tea-cup. There are some pieces which appear to have been derived from modern French works, and in them the Japanese artist revels in the opportunity of treating flowers more rich than those of his own country. Seeing work of this kind, which denotes such marvellous capabilities, the question must arise, what is to be the future of the art of Japan? It is one which is easier asked than answered; but when we find that the eastern artist can so readily treat western forms, it is difficult to resist the conviction that his handiwork will, as time goes on, be more often seen in European houses.

The earliest specimens of Japanese wall-paper did not present many varieties in the colours of the ground, but Messrs. ROTTMANN, STROME & Co. have succeeded in obtaining papers that will correspond with almost every colour that is likely to be used in decoration. There are sufficient tones of brown, blue, green, and red to meet an architect's requirements. Gold is lavishly used in all the patterns, and there is one most effective paper which consists simply of dull gold, without a pattern, but the colour has that peculiar charm which belongs to the east.

The screens are allied to the papers as examples of surface decoration, and are no less deserving of study. The day is far distant when such elaborate works can be produced in this country at prices so moderate. In one which consists mainly of gold thread the subject is a contest between the powers of the air and of the sea, and the elements are suggested with a vigour that is sufficient to drive the students of a school of art-needlework into despair. In another screen flowers are embroidered in natural colours with a delicacy that is equal to that of a water-colour drawing. A third represents scenes from the everyday life of Japan. The figures are raised in three-quarter relief; but, such is the good taste of the artist, that we can think only of their quaintness.



The examples of Japanese art in pottery, woodwork, metal, &c., which are to be found in Messrs. ROTTMANN, STROME & Co.'s warehouse would repay description, but the limits of our space have compelled us to be content with a brief notice of what is intended to be employed for wall decoration. A visit to the warehouse will demonstrate that aids towards the beautifying of houses have been lately increased, through the enterprise and good taste of the owners.

### PARIS NOTES.

THE Committee charged with the arrangement for the internal decoration of the Hôtel de Ville have assigned the artists' commissions, subject only to formal ratification by the Municipal Council. Nearly all the great masters of the contemporary French School will be represented in the new building. M. Paul Baudry has been charged with the ceiling of the grand staircase (subject *Peace*), for which he will receive 162,000 frs. The central piece in the ceiling of the first saloon on the quay side of the Palace will represent *The Sciences*, to be painted by M. Bouguereau for 35,000 frs. The mural paintings in the same room will consist of allegorical figures by MM. E. Lévy, Feyen-Perrin, Jules Lefevre, and Hector Leroux, each work costing 18,000 frs.; a landscape, by M. Rapin, to cost 4,500 frs., and two views of Paris by MM. Benouville and de Cuzon, each to cost 12,000 frs. M. Bonnat will paint *The Arts* on the ceiling of the next room, and receive 35,000 frs., while MM. Maignan, Glaize, Humbert, and Morot are to decorate the walls and pillars, each receiving 12,000 frs. *Literature* is the subject given for the ceiling of the third saloon, and will be executed by M. Boulanger for 35,000 frs.; MM. Comerre (36,000 frs.), Gérôme and Jalabert (36,000 frs.), Bellel (4,500 frs.), with MM. Vernier and Vollon (12,000 frs.), have also been commissioned for this room. M. Galland is entrusted with the decoration of the grand gallery facing the quay, with thirteen paintings to represent the first discoveries of human genius—*The Age of Stone, The Discovery of Fire, The Conquest of the Horse, The Wheel, The Lever, The First Ship, &c.*, at a total of 160,000 frs. M. J. P. Laurens will contribute four historical compositions, illustrative of municipal liberties in the fourteenth century, for the room at the corner of the Place Lobau, at a cost of 70,000 frs., and M. P. Rousseau will paint a panel over the chimney-piece for 10,000 frs. M. Jobbé Duval has undertaken the ceiling of the Grand Dining Hall, the central piece to represent *The Feast of Pan and Ceres*, and the side panels *Flora and Pomona*, altogether costing 38,000 frs., and the tympana will be filled with figures of *Hunting, Fishing, The Vintage, Harvest, &c.*, by M. Felix Barras (23,000 frs.). The subjects chosen for the ceiling of the Salle des Fêtes are *Poetry*, by M. Hébert (38,000 frs.); *Music*, by M. Delaunay (30,000 frs.); and *Dancing*, by M. Lenepveu (30,000 frs.).

Among other artists who have received commissions are—M. Puvis de Chavannes, *The Four Seasons*, 25,000 frs.; M. Tony Robert-Fleury, *France*, 25,000 frs.; M. A. Cabanel, *The Four Elements* and *The Four Cardinal Points*, for eight panels, also seven tympana, *The Seven Ages*—in all 72,000 frs.; M. Numa Blanc, *The City of Paris*, 25,000 frs.; MM. Thirion and H. Lévy, *Commerce, Industry, Navigation, and Horticulture*, together 32,000 frs.; M. de Coninck, *The Seine, Marne, Sceaux, and St.-Denis*, 8,000 frs. apiece; and M. Cormon, *The Hours, Night, Twilight, Aurora, &c.*, 36,000 frs. The total credits proposed for the approval of the Council on this occasion amount to 1,550,000 frs., and many others for the internal decoration have to follow.

On the square in front of the Municipal Palace the works in connection with entrance approach or parvis, for which 410,000 frs. was lately voted by the Council, are now in full swing. A stone balustrade, with openings in face of the three entrances, is being constructed along the main front, while the two side doors will be surrounded by bronze columns, ornamented at the base with groups of figures. These columns will be surmounted with glass globes for the electric light. On either side of the principal entrance will be placed a seated bronze figure, representing respectively *Navigation* and *Commerce*. The stone balustrading is to be surmounted by numerous bronze gas-lamps, of artistic design, which at night will thus form a semicircle of illumination round the entrance.

Negotiations are being carried on by the Government for the purchase of Prince de Chimay's mansion on the Quai Malaquais, with a view to enlarging the École des Beaux-Arts. The price asked by the Prince is nearly 4,250,000 frs. (170,000*l.*).

The bronze statue of the *Venus de Medicis*, which, together with the *Gladiator*, also in bronze, always attracted such attention from visitors to the Park of Versailles, has lately been removed from the Bosquet de la Reine, and a marble statue substituted for it. The result of the change is most unfortunate, a bad effect being created by the contrast of the white new figure with the bronze *Gladiator*. The four bronze vases which were formerly in the bower have likewise disappeared.

The exhibition of designs submitted in competition for the 6,000 frs. prize in architecture, founded by Mdlle. Esther Leclère, in memory of her father, M. Achille Leclère, has been opened at the Mazarin Palace. The subject this year was *A Museum for a Country Town*. There were twelve competitors, the first prize being awarded to M. Georges Chedanne, a first mention to M. L. E. Masqueray, and a second mention to M. Eustache, a pupil of M. Ginain.

The Paris *Débats* a few days ago published the following note:—"In our columns of February 26 we reproduced a letter addressed by M. Maspéro to Mr. Scott Moncrieff, Under-Secretary for Public Works in Egypt, pointing out the insufficiency of the resources at his command for the continuation of his task, and for the preservation of monuments of Egyptian art and architecture. Mr. Scott Moncrieff, in publishing this letter, appealed to English men of science and to all interested in archæological work to aid M. Maspéro with funds. Several of our readers have thought it impossible for France to leave to England alone the honour of responding to the demand of our countryman, and have asked us to receive subscriptions in support of M. Maspéro's researches. We have great pleasure in complying with this desire, and shall transmit to the explorer any sums that may be forwarded to us." In response to this appeal 12,150 frs. have already come in within the space of four days, among the subscribers being the Barons Gustave, Alphonse, and Edmond de Rothschild, MM. Léon Say, Bischoffsheim, Joubert, De Reinach, &c.

At the meeting of the Académie des Sciences last week, M. Faye read the resolutions adopted by the committee appointed to consider Admiral Mouchev's proposal to transfer the Observatory to another site. The committee is favourable to its removal to some spot in the neighbourhood of Paris, but conditionally on the present buildings being preserved to their actual purpose, and that the necessary grounds for carrying out astronomical observations be kept. The matter will be further discussed in one of the private sittings of the Academy.

Last week the Parliamentary Committee of Inquiry into the industrial crisis, sitting under the presidency of M. Spuller, took the evidence of the roof-building contractors, of whom there are about 700 in Paris, 111 being members of the Syndical Society. The number of workmen generally employed in this branch of operative industry is estimated at 7,000, and there are three scales of wages. The tilers and metal roofers earn 7 frs. 50 c. per day; the plumbers and zinc workers 7 frs., and the assistants in both branches 5 frs. These wages are the same in summer as winter and when work is slack the rate is not diminished, but the best men are selected to continue while the others are discharged. The evidence of the masters showed that in 1852 the wages allowed to timber-roofers were 5 frs. 75 c., to plumbers 4 frs., and to assistants 3 frs. 75 c. In 1862 these rates had risen to 6 frs., 5 frs. 50 c., and 4 frs. respectively; while in 1872 they stood at 6 frs. 25 c., 6 frs., and 4 frs. 25 c. The advance to present rates occurred principally during the building boom that prevailed in Paris during 1882 and the early part of 1883. According to the masters there is at present no actual crisis in their trade, but merely a certain slackness.

Some delegates from the Paris Carpenters' Unions also gave evidence before the committee, complaining energetically that the extension of foreign competition was ruining them. The average wages received by carpenters were 8 frs. per day, but, counting 245



working days in the year, this amounted only to 5 frs. 38 c. daily, an amount totally insufficient, urged the speakers, to feed and bring up a family. They consequently claimed a minimum of 9 frs. for a day's work.

### THE ARCHITECTURAL ASSOCIATION.

AN ordinary meeting of the Association was held on Friday evening, the 29th ult., Mr. Cole A. Adams, President, in the chair. A vote of thanks was passed to Messrs. Braby & Co. in connection with the visit made to the Exhibition buildings, Battersea Park, and also to Mr. Trubshaw, for conducting the party. The next visit was announced for Saturday, March 8, to the new Oratory Church at Brompton. Mr. E. F. Eales then read the following paper:—

#### Dwellings in Flats.

The system of living in suites of apartments, called flats by us, has been in vogue for years in Paris, Vienna, Berlin, and in the principal cities of the United States; in fact, in Paris it is recognised as the correct way of living; but in England, the English being slow to adopt strange ideas, it has happened that until within the last eight or ten years no such system has been introduced, those whom flats are most suitable for, and those whom flats are most suited to, being content to exist in lodgings or boarding-houses, which, for expense and inconvenience, cannot be improved upon. The idea is still extant that there is an unwritten law about an Englishman's house being his castle, but this feeling is gradually dying out with sensible people, and little by little they are coming to look upon the advantage of occupying a set of chambers or (on a more extensive scale) a suite of rooms, as possibly an improvement upon the old way of living. As yet, I have never heard any one who has resided in a flat say that living in a small house (in the desired privacy) or in lodgings is preferable to the accommodation which can be obtained for the same or perhaps a trifle larger rental in a flat. This would point in favour of residential flats. In this great city of London it is essential to economise space, as day by day, for untold years, buildings have been erected which gradually have extended in all directions to what not a long time since we considered the suburbs. This economy of space is a great point for architects to consider, and as the population and business in the City increase, more accommodation is naturally required by those men who must not be too far away from their business, or too far away from what is called the fashionable quarter. If the idea were grasped that it is as healthy to live and breathe seven or eight storeys up in the air, and that every access by elevator can be obtained, we should see the same space which accommodated one family in a large house, say in Russell Square, very likely much too large for actual requirements (which means expense) would, by erecting a building on some site arranged in suites, accommodate at least six or more different families, and in this way if flats were erected in convenient neighbourhoods at convenient rentals, untold numbers would greatly prefer pitching their camp within easy distance of their work, instead of living in the suburban villa, which means for business men getting up at an unearthly hour in the morning to catch the train, and the same rush to catch it to return, not mentioning the travelling expenses, and the troubles arising from continual railway travelling.

The one great objection put forward by people is this same very excellent method of accommodating, say, six families under one roof, and using one staircase or elevator; but in this there is a great deal of fancy: if the staircase be well arranged and well lighted it becomes nothing more or less than an ordinary public staircase leading to entirely separate and self-contained tenements. With the advantages to be obtained the objections vanish, *i.e.* when a man finds that he is free from worry, trouble, and continual putting-hand-in-pocket business (as is the case with an ordinary householder), at the same time being able to enjoy the advantages of a separate establishment, he appreciates the difference, and almost looks forward to paying his quarter's rent with pleasure, feeling freed from all cares and household difficulties. Now, very different is the experience of a man who inhabits a newly-built house, built for the purpose of letting, and not comfort. Let us take it for granted, then, that the objection to living in flats has died a natural death, and that it has come to be looked upon as a most excellent method of economising space, relieving the tenant of trouble and responsibility, and giving the architect a chance of erecting a building which in its size must naturally offer more facilities for treatment than the usual London house. A few words as to site. From observation it would seem that this small world plays a large part in the development of this system, inasmuch as up to the present time it would be futile to build flats out of a convenient neighbourhood—by that I mean over a certain distance from Charing Cross—the people who are prepared to live in flats requiring to be near everything. This is evidenced by the number of flats which still remain unoccupied, not altogether on this account, but possibly from the inconvenient arrangement of plan which is to be found in some, more especially in those adapted from the ordinary dwelling-house, which you can well understand

has prevented their being treated as self-contained: another reason being that in some instances more accommodation is provided than is necessary or required, and a proportionately higher rent asked than is to be easily obtained. What, then, fixes the value of the ground is its proximity to the business centres, which is not only advantageous to the professional man, but to those who lead lives of pleasure, for which advantage larger rents than is customary to be paid for small private residences will, probably, be obtained. It is evident that this system of building must be in a measure speculative; no sane person would lay out a large sum of money in the erection of flats for the pleasure of letting people live in them at the expense of capital. There is no reason, then, why companies or syndicates should not be formed with the idea of erecting this class of building with good results. In Paris these large buildings are generally erected by the insurance offices, in America by limited companies or private individuals. An excellent description of a kind of syndicate for the promotion and development of flats is given by Mr. Gale in the published notes of his "Godwin Bursary Tour" to the United States, in which he says:—"A house, club, or co-operative building, in which each of several heads of families, by previous agreement, arranges each to own and occupy his rooms, thus giving the opportunity beforehand for each member to choose his associates in the affair, and it allows each to form an opinion of the desirability of his neighbours, thus avoiding the chance of proximity of undesirable persons or families under the same roof." The basis of the arrangement is this:—The property is vested in the members subscribing, and is held by them as a corporate body, which leases to each member his own apartment for ninety-nine years. This lease is marketable property, and can be sold like any lease of an ordinary kind. The arrangement makes the investment of the building-fund money a safe one, and one for which there is quite as much certainty of finding a sale as the lease of an ordinary house. Again, should an owner elect to sell his share, to guard against an objectionable person being admitted, each lease has a clause providing that only a person approved by a certain majority of members can be the purchaser of the lease. The expenses of service, supervision, repairs, warming, and lighting are equally divided. By this means a large and commodious block could be erected, giving each subscriber to the outlay very good security for his money, and enabling buildings to be erected which, unless several joined together to raise the required capital, would remain unbuilt. The idea is new in this country, and well worthy of consideration.

The French system of planning the *maison à loger*, or flat, appears to be divided into three classes. The first (of which I have a typical plan) shows a site with two frontages. The ground plan reveals the usual *porte cochère* for the accommodation of a carriage driving through to the inner courtyard. On the left of the entrance is the *concierge* and the principal staircase leading to the suite of flats above. These buildings, of course, vary in size. This present one provides three reception-rooms, three bedrooms, kitchen, and offices to each suite. Leading from the courtyard are the stables and servants' staircase leading to top floor. One great feature in all the French plans is the antechamber, which you enter, leading to each suite, from which the different rooms lead off. In all cases we find a secondary staircase from the basement to top floor for the servants and kitchen service. This is good in its way; but there are objections to it, as also to the arrangements for sleeping the servants, being crowded together indiscriminately upon the top floor. English people will object to this arrangement, as they prefer, and not unreasonably, that their servants should be within call, whether in the day or night, besides feeling a kind of responsibility for their welfare, which might be interfered with if this plan were followed, besides giving them opportunity to cultivate the female failing of gossiping. With regard to the stabling forming part of ground-floor, we have no instance in London of this arrangement, which, although convenient, yet if the same accommodation could be obtained in the neighbourhood of the building, undoubtedly would be preferred, and is not likely to be imitated here. On the upper floor the rooms communicate with one another throughout the suite. This plan gives a good arrangement of rooms, but I fear that the sites in London would not allow of an inner court—say 50 feet square—being left open to the sky, a greater economy of space being essential, as the ground rents in all instances asked are quite full, and the rents obtained very far below what the Parisians are accustomed to pay. Cellars are allotted to each tenant in the basement, which is devoted to stores for wine, coals, &c. No basement is devoted to living purposes, but we have to utilise this space for the sake of obtaining rent; but it would be far preferable if we followed the lead of the Parisians in this.

In the second-class plan the ground floor is devoted to shops, the entrance leading to main staircase and *concierge*. Here again we have the secondary staircase, but the number of rooms is less—two reception-rooms and three bedrooms, and kitchen. The staircases are lighted from wells on each side of main stairs. This arrangement is not good, inasmuch as the light cannot penetrate in a six-storey building to the ground floor, or, if it does, giving a very small quantity. Here we are reduced to one water-closet, which is a failing, as English people certainly will not be at all put



out if two are provided; the servants in this instance finding their accommodation in their own quarters. Another plan of this same class is devoted to shops on ground floor, and one suite only above. Here the staircase is lighted from the open, and it would be well to remember that in all instances it is desirable to obtain light to stairs, passages, and especially rooms from the street, either back or front.

The third-class plan shows the ground floor arranged as shops, there being a double frontage, the main entrance to each leading to the *concerge* and principal staircase as usual. Here the back arrangement for open space is well contrived, the party wall being kept down to height of ground storey, and open above to the extent of the two houses. On the floors above the accommodation is not large—two reception-rooms, two bedrooms, kitchen, and water-closet. The height of these buildings in Paris is regulated by the width of the streets, and does not exceed five storeys, including the *entresol* over the ground floor. The suites are arranged from three to fifteen rooms, the rent varying according to locality. Large numbers of very handsome buildings of this kind have been erected during the last few years in distinction to what we know as private houses, which are, comparatively speaking, scarce. The American architects have already built some very fine blocks, consisting of single suites up to six on each floor, and being under one roof.

Beginning with an ordinary suite, let us examine the plan of a building called "Wyoming." This has three frontages, which in planning is a great advantage; a central staircase lighted from a well-hole and top light, which is the great drawback to the plan, otherwise the arrangement is very workable. Entrances are to right and left of main staircase, the elevator being worked in well-hole of same. Here we have the secondary staircase communicating with servants' offices, and you will notice this is arranged so that the kitchen in each of the two suites shall be of easy access. The sleeping and reception rooms are rather mixed up; but the size and number of rooms is all that could be desired. The secondary water-closets are badly placed, as also the servants' bedroom, left-hand suite leading direct out of kitchen. The dining-rooms might be another 18 inches wider with advantage, 13 feet not being sufficient. A very ingenious contrivance for additional room in the rear of a block is shown by the plan of an apartment house, close to the Broadway, where an attempt has been made to keep to the form of the city lots, which are 25 feet frontage by 100 feet depth. In this instance two of these lots are taken together, giving a frontage of 50 feet. There is a basement and sub-basement, the remaining floors being 14 feet high from floor to floor, the two top floors being 9 feet. The rear portion of the building has 10 floors above the basement, each 9 feet high. This difference in the number of floors in the two parts of the house is designed to give more accommodation and light. The plan shows the way in which the second, fourth, and sixth floors are laid out. The entrance is arranged in the middle, leading to main staircase, the elevator being constructed in the well-hole; entrances on right and left to the separate suites. Taking the one part of the plan, it will be seen that there are a private hall, library, parlour, and dining-room, butler's pantry, kitchen, and five chambers; the staircase by the side of dining-room leads downward a few feet to the rear part of the building, all the rooms here being on a different level. The small staircase in butler's room leads to an upper room, which can be used as a store. The other part of the plan and section of the rear go together, the rear portion of the two flats being over one another; hence the name given to these flats, Duplex or Double Flats.

The accommodation is the same on each side, excepting the rear part of one is approached by stairs leading up, and the other by a flight going down. The intervening floors—first, third, and fifth—are all on the same level, the house being simply divided through the centre with two sets of apartments. The staircase in this instance is left entirely to a top light, and of necessity must be very dark. "The Berkshire" is a very well-arranged plan taken as a whole; it has the benefit of being lighted on four sides. The rooms are well proportioned, each suite containing three reception-rooms, four and five bedrooms respectively, kitchen, bath, and water-closets. Here, again, the two kitchens are brought together and served by secondary staircase. The main entrance has a borrowed light, and I presume a lantern at top, but no direct light or ventilation, which mars the otherwise skilful treatment. Here the reception-rooms are kept distinct from the bedrooms, and the kitchen and servants' room distinct again, being approached by a lobby, which entirely shuts off direct communication with the remainder of the flat. The Americans are good in providing cupboard accommodation, especially to the bedrooms. Another point is the fixed washing arrangement in each bedroom, in lieu of our washhand-stand.

Another plan much more extensive, embracing as it does six suites on a floor, occupies an excellent site to deal with, about 210 feet square. The French system of an internal court is adhered to, and which in this instance is 100 feet by 90 feet, less the projection of kitchens, &c., belonging to two of the largest suites. This block has frontages to three streets, the fourth being set back for the purposes of light; the architect has thus been enabled to have an entrance from two of them. The principal entrance is

wide enough for a carriage to pass through and set down at the four different entrances. The accommodation provided is eight bedrooms, three reception-rooms, kitchen, and offices. The staircases are well lighted, and each suite is provided with an elevator, delivering by the side of each entrance. Of course, this is an ideal site to have to deal with, and I do not suppose there are likely to be many similar to it in this city; in fact, the extensiveness of the whole block is more than at present we have requirement for. The rents obtained for these suites is 600*l.*, slightly more than is likely to be given for a similar suite of rooms in London.

The last American plan is still more extensive, and is in course of erection. The central part apartments, designed by Messrs. Hubert & Pirsson, architects, consists of a series of eight blocks, occupying a plot of 210 feet by 425 feet. Each block has a frontage of about 100 feet, and contains thirteen suites, three of which occupy the whole surface of the building—that is, a surface of 7,800 square feet—and ten of which occupy one-half the frontage by the whole depth, with the duplex arrangement at the rear for kitchens, servants' rooms, &c.—*i.e.* an area of 4,700 feet. The cost of the four corner blocks is put down at 56,000*l.*, the rest at about 50,000*l.* each. An independent company, free from personal liability, is organised for each house, and the capital stock is divided into sixteen shares, each share representing an apartment occupying half a floor. Those wishing to occupy a whole floor would secure two shares. Two-thirds of the outlay (put at 240,000*dols.*) is subscribed—*viz.* 160,000*dols.* amongst sixteen shareholders, giving an equivalent of 10,000*dols.*, or 2,000*l.*, to be found by each, the remaining third of outlay being raised on mortgage. The ground rents and all outgoings by way of interest on mortgage, rates and taxes, salaries for service, &c., is equally divided, and for a single share amounts to about 260*l.*, making the total rent, including the interest of 6 per cent. on the subscribed capital of 2,000*l.*, up to 380*l.* per annum rental; the accommodation being three reception-rooms, five bedrooms, kitchen, servants' offices, bath-room, &c. The accommodation in the apartment occupying the whole floor being four reception-rooms and hall, seven bedrooms, kitchen, and servants' offices, and for which an annual rental of 760*l.* is paid. These buildings are constructed substantially, and are so far fireproof as iron beams, brick arches, iron stairs, &c., can make them. There are two elevators serving each suite, the rear one being in connection with the entrance to the kitchens. The whole building is warmed by steam, which is conveyed by pipes to each room, and then heats the room by means of direct radiation from a coil of pipes which are placed under the window or in some convenient position. This item of warming by steam power makes a considerable difference in a man's coal bill. Boiling water is also supplied throughout the apartment by means of a boiler in the basement, a second boiler also working the pumping arrangements for the cistern at top of house, which provides the head of water required for the hydraulic elevators, and supplying the required steam power for heating purposes.

The larger blocks erected by the Americans are carried up to ten or more floors, the same varying from 15 feet in height downwards: this means a lofty building. The only high building of this kind that we have is known to all, and that is thirteen stories in part. The Queen Anne's Mansions referred to, erected a few years since, comprise an enormous pile of buildings of very dismal appearance, having a very bad approach; the upper floors, however, have a good view over St. James's Park, which has to make up for many deficiencies. The building is more or less a large hotel, arranged in suites of apartments, the *cuisine* being entirely separate and provided by the owners at a certain tariff. The *cuisine* arrangements provided are certainly advantageous to some people, especially in small tenements where there is no room for kitchen accommodation, even if required; but what is understood by "self-contained" should mean that all such necessary offices should be provided in each suite, so that a tenant can do exactly as he pleases, and, in fact, have the accommodation of an entire house arranged on one floor—unless this is provided the suites become more or less chambers. The space which these offices would occupy could certainly be utilised as bedrooms to advantage, and the general kitchens would occupy the basement; but unless this system is carried out on a large scale like the Queen Anne's Mansions, I fear the caterer would make but a poor livelihood. This is about the only site where this enormous height would be allowed; and, after all, it is a question whether, say, nine storeys is not high enough. This would be something like 130 feet above the pavement. It is not these colossal buildings which will be most patronised, but those accommodating say, 12 families at the most. Of the flats in London, the majority you will find of the medium height, although in Victoria Street, Westminster, a large block of nine storeys is now being completed, providing suites of 17 rooms, very well planned and well lighted; but the rent required to pay a decent interest on the outlay must be something considerable, and likely to be beyond the reach of many people at the present time. This street seems to be made up of these buildings; but the entrances, almost without exception, are very dark, and I understand the internal arrangement anything but good. We have not yet developed in this country our appreciation of flats sufficiently to warrant the building of these suites upon the



extensive scale that some are now being erected—that is to say with any likelihood of their being occupied, for the general applicant for a flat seems to be one who is willing to expend, say, 150*l.* up to 200*l.* in rent. In extremely good positions, of course, such as Piccadilly, Park Lane, and a few other expensive localities, fabulous rents might be obtained; in fact, in Piccadilly I am informed that a suite of three rooms and bath-room on first floor fetch 400*l.* per annum, and two rooms and bath-room on second floor 200*l.* per annum.

Another point in considering these lofty buildings is the absolute necessity of travelling by elevator, which, although delighted in by our American friends, yet not one person in twelve over here cares about the motion and dubious sensations which are experienced. Now, by building with, say, six floors above the ground, this necessity is done away with, as well as the entire outlay, which is not inconsiderable, and the expense of attendance upon same ever after; but of course in large and lofty buildings it is essential that this accommodation should be provided and used at pleasure. The outlay required to provide an elevator—say, to serve six floors—is between 400*l.* and 500*l.*; the wages of an attendant and water-rate would bring the annual expense to about 800*l.* It is a question, therefore, unless a building is more than five floors above the ground, whether this means of gaining access to the upper regions is warranted—for in a building of the number of floors mentioned the same rent can be obtained whether this additional accommodation is provided or not. Another drawback to excessive altitudes is the proportionate bulkiness of the walls, which, as you know, are regulated in thickness by their height, the sacrifice of ground area thereby, and the interference with free ventilation, and, most certainly, of light. Unfortunately, there is no restrictive power preventing a building going up to unlimited height in an old street which may be narrow in the bargain; but the 85th section of the Metropolitan Local Management Amendment Act lays down the rule that no building in any new street of a less width than 50 feet (except a church or chapel) shall exceed in height the width of the street without the consent of the Board of Works; so in streets over 50 feet in width there is absolutely no control as to height. The Metropolitan Building Act, however, carefully confines us to the superficial area, which, in the case of building flats, becomes rather irksome. I allude to the 27th section, which will not allow you to build (if the area exceeds 3,600 square feet), without providing party walls vertically and party arches, and fireproof floors separating the different tenements.

One of the essential points in the erection of these large buildings occupied by different families is, that they should be constructed of fireproof materials so far as is possible, and ready means of egress provided in case of necessity; so, perhaps the stringency of the Act in the way of precaution is not to be regretted.

The most convenient form of plan for a site of ordinary dimensions is an elongated parallelogram, having front and back light; but it is so seldom that a straightforward piece of ground is to be had that it is rather futile to say what shape is most workable, as upon an ideal site an ideal plan could be arranged. This plan is 105 feet frontage, with central entrance, the suites being entered right and left. Ample light is obtained both to back rooms and passages: this leaves three good rooms in front, consisting of dining-room, drawing-room, and best bedroom. The number of bedrooms mostly asked for is four, and in a family suite should be never less. To this add the kitchen and offices, bath-room, and two water-closets. This amount of accommodation seems to be all that is required by the ordinary applicant. The correct and best arrangement, where possible, is to have the bedrooms separated from the kitchen and servants' part by the reception-rooms. The kitchen should be in close proximity to the dining-room, for obvious reasons, and in these medium-sized suites it is well to provide a hatch between the two rooms, with small shelf, so that one servant may serve from the kitchen to the servant inside the dining-room. Some people are dreadfully frightened in case any smells of cooking should penetrate through this opening to the dining-room; but if properly attended to, the danger of being objectionable can be overcome. The passages should be as wide as practicable, and never less than 3 feet 6 inches clear, with light at end or side, so that the windows may be opened, and a current of fresh air admitted, and the whole suite kept pure and fresh. In these long frontages we must not forget that the Amendment Act comes upon us; until this came in vogue the Building Act, sect. 29, required only (as it does still in building upon old sites) an open area of 100 feet super in the rear or on the side of any dwelling-house, unless otherwise lighted from a street or alley; but now, in the case of new sites, any frontage over 30 feet, according to the progressive scale laid down by the Amendment Act of 1882, must have an open space in the rear exclusively belonging thereto of 450 feet super. If only six suites are required, a frontage of 37 feet to 40 feet, and depth of 80 feet, will allow of a very workable plan as this:—By having the entrance at the side you are enabled to obtain two good rooms in front, and keep the self-contained principle on each floor. In this plan the position of kitchen is handy to the dining-room, and the bedrooms follow right and left of passage, which is lighted by a window at the end, which is an advantage, as I explained before, for the purpose of ventilation. In many buildings not only are the staircases dark, but the internal

passages are without windows, or lighted from small well-holes. If you must have these wells, line them with white glazed bricks. For accommodating twelve suites with, say, a frontage of 80 feet, requires a depth of about 70 feet, and this plan has been schemed to provide the same amount of accommodation as before, but having two suites on each floor. Here we have a central staircase lighted direct; two rooms in front instead of three, as is shown in the plan, with longer frontage, four bedrooms, and offices. This plan works very well in execution, is well lighted, and is tolerably compact, and, with an easy staircase, forms a fair example of the medium-sized flat. Another plan now being carried out shows a block with three frontages, which, of course, is a great advantage, so far as lighting is concerned; but the shape of site is not a very easy one to turn to good account. The staircase has been placed internally, obtaining light from the back, the rooms being arranged round it. The ground plan shows the building arranged for two suites on a floor, with separate entrances. Here we get an entrance hall in each case, also lighted direct. The usual accommodation is provided, the rooms are of fair size and proportion, and on the first floor and upwards can be used as one suite or two at pleasure of tenant. The staircase is lighted at the top by a lantern light in addition to the side windows, on account of some portion of the light being obscured by the elevator, which is to be worked in the well-hole of same, and serving six storeys above ground floor.

*Staircases.*—This part of the subject deserves a separate heading; it should be as I have before mentioned, one of the first and principal points in a plan. How much more inviting is it to go into a building and find a bold, handsome staircase well lighted, the stairs at least 4 feet wide, of easy rise, the walls finished with some show of decoration, which though not obtrusive, yet sufficiently attended to to give the visitor, as it were, an appetite for further exploration, than it is to find one's self, as in some cases, in a narrow, bare, dark, dreary passage with a breakneck staircase, the walls simply distempered with a dark brown dado or perhaps not even this, the hall finished with plain York paving, and everything as cheerless as could be desired. Surely a little money in this direction is well laid out. In the staircases of many of the new flats in Paris, you will find the walls panelled and lined with polished marble slabs, the treads of stairs lined with white marble and carpeted, leaving the impression that you are in some private mansion rather than one occupied by some dozen families. I am sure those intending planning flats will reap satisfaction if they give their best attention to this part of the arrangement of plan. As to the construction of the stairs they should of course be of fireproof material, as is required by the Building Act (sec. 22), which demands that in every building containing more than 125,000 cubic feet, and used as a dwelling-house for separate families, the floors of the lobbies, corridors, passages, and landings, and also flights of stairs shall be of stone or other fireproof material. In the flats known as Hyde Park Mansions, they have been carried out in Portland cement concrete; in some instances the treads are cast separately, and pinned in after walls have settled, the landings being pinned in and carried by light iron girders; in other instances they have been cast in whole flights *in situ*. A mould of the flight is carefully made and supported by struts, a chace for the end of each step being cut in wall, and when ready, the mould is filled and allowed to stand some three or four weeks and then removed, leaving a very clean staircase. This method is cheaper than fixing the treads separately, on account of the labour required in fixing, this material being very heavy and rather difficult to handle. The cost of the latter process is about 12*l.* per single flight of twenty steps and landing, as against 20*l.* if fixed separately. The treads are finished with a fine face, and when thoroughly dry have a clean appearance. To add to the lightness, glazed tiles have been inserted in the risers, which relieves the mass of greyish colour and gives somewhat of a finish to the whole. Lining the treads and landings with marble makes an excellent finish so far as appearance is concerned; but it necessitates carpets being used, otherwise a good deal of slipping about would be experienced with some few broken bones to mend. It is a moot question whether it is advantageous to carpet the staircase, as from experience we find that, with even the traffic in an ordinary dwelling-house, stair-carpets soon become shabby; and so the question is whether it is not better to leave the stone or concrete, as the case may be, in its nakedness, taking care to have the strings and margins painted, and the remainder kept as clean as possible. The landings in the staircases of the flats mentioned are finished with tiles in some cases, in others with tesserae, chips of marble, formed in patterns, which makes a clean and bright finish. In these flats I have endeavoured to add to the prominence of the staircase by providing a large landing on each floor, running from the stairs to the front of house, with a glazed screen, in which can be introduced coloured glass, and, if necessary, can be fitted up with settees or made useful in many ways, as well as being an aid to ventilation.

Before quitting the staircase there is a point which also strikes me as being worthy of note, and that is the egress on to roof in almost every house you go into. I have met with but one exception. You find that the way on to the roof is through a small trap-door in top floor ceiling, this averaging about 18 inches or



2 feet square, scarcely large enough for a small man to get through, and very awkward for fleshy ones. After straining the muscles of your legs from standing on a rickety step-ladder (which is not always forthcoming), you get into the roof, and by this time in a filthy condition. You now come to another trap-door, which in all probability you will find bolted, and, bolts being rusty, refuse to move. This said trap is covered with lead to make things heavier, and when you get this open would have been time enough (if there should happen to be a fire going on) to have suffocated everybody anxious to get out. Besides, how inconvenient for females, who generally have pluck enough in most things, yet hardly like squeezing through a hole without knowing where they are going to. To obviate this inconvenience I always carry out the following arrangement:—From the top landing, form a narrow flight of stairs with handrail and balusters, leading to a landing at top and with a sufficient headway to stand up, say 7 feet, formed as a dormer to the roof; unlock the door and you are out, either in a gutter or on a flat, without trouble, inconvenience, or dirt, besides yielding an opportunity for householders to take a survey of their tiles or gutters and make themselves acquainted with what one in a thousand never troubles his or her head about. The buildings in question are furnished with high-pitched roofs, with cellars, leaving ample room to form cubicles, with a central passage; these are devoted to each tenant as a box-room, and are most convenient. The door leading to this part is shut at a certain hour, and each tenant is under certain responsibilities as to usage.

*Secondary Stairs.*—Most of the plans we have seen this evening have a secondary staircase provided for the use of servants, and it is essential that there should be a method of tradesmen communicating with the kitchens without using the principal staircase. There are many objections to its use, as being an incentive to misbehaviour on the part of domestics, as also a loophole for servants of other suites congregating and becoming a nuisance in more ways than one. The plan adopted in Hyde Park Mansions is to have a lift, say 3 feet by 2 feet 6 inches, serving each kitchen from the basement, and, as the kitchens are all at the rear, the lift is out of the way. At the basement level a pair of folding doors open, and the lift is exposed to view. On one side of opening is a list of the tenants with their respective suites, number, and floor, and a speaking-tube to the kitchen of each. The tradesman comes with his order, whistles to the cook, say of No. E second floor; she replies, the man puts his basket or what not in the lift, and pulling the rope the lift arrives at its destination, and, when emptied, comes down again to the basement. This arrangement has been in work some three years, and answers well enough at any rate for a substitute to the secondary staircase—which means space, expense, and possible annoyance.

There should be two water-closets to every suite; one can be in the bath-room, if space is to be economised, and the other in the neighbourhood of the servants' part, and, if possible, with a lobby to same open to external air. Be careful not to place a water-closet just as you enter the flat; contrive it where it will not be obtrusive, and, by all means, with a window to external air. All the soil-pipes should be carried down outside, and left open at top, and trapped at bottom; and be careful that any repairs to a tenant's pipes can be rectified from his own premises, without having to go into the suite above or below, as the case may be. Ventilating each apparatus by a pipe going up to roof, deliver the rain-water pipes open on to syphon traps, turning the wastes from lavatory and bath into same—this simple system answers as well as can be wished. In the flats alluded to we have a constant supply served by a 1½-inch rising main running from bottom to top of building, with branches on each floor to suite and cisterns, with a draw-off at sink from the rising main and one from a cistern; the precaution of the two draw-offs being in case the constant supply should be stopped by reason of repair or accidents, when the supply can be obtained from the cistern in reserve. Each water-closet has a separate cistern. The baths are served with hot and cold, with circulating pipes from kitchen boiler in each instance; the lavatories being supplied from same source. This method of supplying hot water, totally distinct in each suite of rooms, is by some considered more agreeable than having furnaces in the basement which supply the whole building, which in the case of medium-sized flats would be hardly of sufficient advantage to warrant this outlay. It is customary when there are furnaces to have hot-air flues in the staircase walls with hit-and-miss gratings, so that the hot air may be regulated both on the staircase side and also in the private hall of each suite. It is only in the winter months, however, that the staircase requires warming, and when there is a plentiful supply of gas-burners, which in the dark months are brought into requisition in the early morning and afternoon, the staircase becomes warmed without the aid of hot-air flues. This is the case in staircases which are 14 feet by 10 feet.

*Ventilation.*—When the windows open to the open air, and each room has a fireplace and ventilator communicating with external air, there is every chance that the rooms may be kept fresh without calling in the aid of shafts and tubes and elaborate experiments which generally end by blowing one's head off, or being stuffed up to spite their inventor. To aid the idea of independent ventilation in these buildings, the top sash of the windows in most instances is made to hang, and finished with casements underneath, an

arrangement which, when there is a balcony provided, is of much more convenience than the double-hung sash. By this means the top sash is opened at pleasure, and in the summer the casements can be thrown open, thus gaining the advantages of each. Following on ventilation we come to the means of getting rid of the dust and rubbish accumulating daily. This is done by making use of a flue provided in the neighbourhood of each kitchen, fitted with an iron door and cheeks, with indiarubber rabbetted rim, so that it may be air-tight. This flue communicates direct to the basement, where there are large receptacles sunk below the yard level, which are emptied twice a week. This saves a great deal of trouble in carrying the refuse down, or sending it in the lift. The place is thus kept sweet, and the process of collecting being carried out in the early morning, does away with a possible nuisance.

*Internal Finishings.*—The two principal rooms should be so arranged that they can be thrown into one, as occasion may require, which can be done by one of three ways—by having folding doors, sliding doors, or revolving wooden shutters. The drawback to the first is that so much room is taken up when folded; the second destroys the walls; and the last is cumbersome, as the boxing must show below the ceiling line, and when finished looks anything but well. The Americans patronise the sliding doors, which is certainly the most convenient arrangement. The rooms should not be too lofty on account of the expense, unless the Duplex system is required, when it necessitates having the front rooms 14 feet at least, the average height for the best floors 11 feet, finishing with 9 feet at top. This height enables you to get ample window light. The interior of rooms is improved by introducing bay windows, either circular, splayed, or square; the preference is generally given to the circular. These windows, as well as improving the appearance internally, help to break a monotonous elevation, especially if balconies are provided to the principal rooms—a feature which forms a substantial item towards letting purposes. These balconies give the tenant (if he is some distance up from the earth) the opportunity of feasting his eyes upon flower boxes, which will not only make his own rooms pleasant, but will make up to him partly the lost pleasure of seeing what is going on in the lower regions, which, at the second floor of a lofty building, he could not do unless standing on the balcony. The principal rooms should have speaking-tubes provided, communicating with the kitchen, which should be fitted with as many cupboards as can conveniently be obtained. The coal bunk need not be large, as it can be replenished from the vaults in basement which are allotted to each tenant. The ladder should be placed so as to get external air; all the necessary fittings for kitchen and scullery purposes provided. Each entrance door should have number, with bell, letter-box, and private latch to door. In place of the *conciierge*, or the American janitor, who require two rooms at least allotted to them, and are both an expense, we have substituted a small tablet in the entrance hall of each block of flats. A neat tablet is fixed on each side of entrance hall, with the names of the tenants printed thereon, with their corresponding number or letter and floor. In a line with the name is a slip with "in" or "out," which can be manipulated at pleasure, enabling the tenant to let any caller know if he is within or not, thereby saving the visitor the trouble of travelling up the staircase, perhaps to be disappointed. As each suite is entirely self-contained, with a separate entrance door, there is no necessity to lock the main entrance door, which can be opened by anyone up to a certain hour, after which each tenant uses a pass key. This arrangement meets every requirement. If any special inquiry be needed, the applicant simply adjourns to the manager's office, or consults porters, who patrol the buildings without intermission day and night, who are more alert, and therefore more useful as custodians, than the *conciierge*, who remains at his post as a fixture. With the exception of gas (each tenant having a private meter), everything is provided in these flats, the use of telephone included, the tenant simply paying his quarterly rent.

It would be a mistake to pass over a point connected with flat building, which has forced itself upon the notice of many, especially as we are now considering the propriety of developing buildings arranged in flats, and it is this—the eagerness to snatch at anything that is new; in this instance flats. No sooner than an idea has been started and carried out, and proved to be capable of producing a fair return upon an outlay, than hundreds rush, thinking to do the same; not by using common sense and supplying a want, but in supplying what we are at present not ripe for: I allude to the extensive and expensive buildings which are now going up arranged as flats, for which rentals must be paid to recoup the investor larger than there is any likelihood of obtaining. A man of ordinary income thinks, upon seeking a house, that a rent of 150*l.* per annum is (and he is right) a sufficient sum to pay for being housed; add to this another 50*l.* for rates and taxes, making roughly 200*l.* per annum. How many men can afford to pay this sum in rent? Those who can mostly prefer having a house to themselves rather than a flat; yet we see and hear of suites starting at rents of 500*l.*, and going up to much larger figures. This is wrong: those who require flats are those enjoying moderate incomes, and require to economise what they have. If suites can be obtained from 100*l.* to 150*l.*, then the new system is likely to be patronised; but so long as buildings are erected in



an extravagant manner, regardless of what people are able to pay, then surely some of these undertakings which are now in hand will stand idle. Look at Paris, which during the last ten years has been erecting huge buildings for this purpose, the result being, we hear, stagnation of acres of property. Why? Because they have been built on too large and extravagant a scale, and the people are not forthcoming to take them. Those who intend following up this method of building will do well to consider this, and although producing a tenable and taking building, will endeavour to do so with medium views, affording as much and as convenient accommodation as is in their power, with a view to letting the same at a reasonable rental, bearing in mind that at present and for some long time to come the men of independent means will prefer living as they live now—in their town houses, and the people they have (in a word) to cater for are those who lead busy lives and enjoy, comparatively speaking, but small incomes. What we really want are fair-sized, well-proportioned rooms, with plenty of air and light, large and easy staircases, well-ventilated, well-lighted passages, every room having a window to the open air (wellholes being abominations), with a fireplace in each supplied with all the conveniences and finished with some show of taste.

The PRESIDENT in opening the discussion said that residential flats for London was a question that had of late been forcing itself into consideration, and one that would force itself more and more to the front. The growth of London had been enormous, and the only extension possible was upwards, as far as regarded the headquarters of business, literature, art, &c. He considered it ought to be possible to construct dwellings within a reasonable distance of such centres. This would of course demand a thorough knowledge of planning, so that space could be utilised to the utmost, and in the opinion of persons qualified to judge it would be a question of utilising not only every foot of space but every inch. Massing population in this way on a small area would necessitate extra precautions and further legislation in regard of fire and sanitary matters, and among such matters it would have to be considered how best to deal with outbreaks of contagious illness, or in the case of fire, how to avert panics and fatalities from the occupants crowding down the staircase. In residential flats the roofs must certainly be not only fireproof but easy of access, and balconies should also be provided where the occupants could take refuge in case of fire. The development of the system of flats for dwelling purposes would, however, depend on questions of cost and finance.

Mr. GOTCH said he rose to propose a vote of thanks to Mr. Eales rather than to pass any remarks. He considered, however, that the large rentals asked for flats were prohibitive. The money asked for a flat would enable a person to pay his railway journey to town, live in the country in a house to himself, and have the enjoyment of a good garden—and this latter English people had a great liking for. The system of living in flats seemed to work well in Paris, but Frenchmen were different from Englishmen, who were insular in their tastes. The Frenchman cared little for privacy, or for sanitary matters, nor did they care about gardens as English people did.

Mr. LOVEGROVE seconded the vote of thanks. In the course of his observations he alluded to some unhappy experiences of living in flats run up by speculative builders. The question of cost combined with proper planning and sanitary arrangements would require careful consideration.

Mr. TUCKER (of the Queen Anne Mansions) said that floors must not only be fireproof but sound-proof, a point overlooked in almost all London flats. A second staircase, he thought, was a *sine quâ non*. In case of fire, smoke would probably not affect both the main and back staircase. The Americans were far ahead of other countries in the matter of elevators. As to the danger of the shafts acting as flues in an outbreak of fire, in providing the necessary hydraulic apparatus provision also existed against fire in the way of water-tanks and pumping machinery, and a column of water as thick as a man's leg could be sent up the shaft. A dwarf passage, with a swing door at each end, should separate the kitchen from the other rooms, and a window, if possible, provided in the passage, the draught of which, when open, would set towards the kitchen. The top floor in flats ought really to be the dearest in the building. Even for people in delicate health it was the best part of the building. There was a beautiful light, total absence of sound, and freedom from dust and soot. A house of ten rooms, at 7½. a room, would amount to a rental of 70½. If flats of ten rooms could be had for 70½., 80½., or even 90½., they would let not by scores or hundreds, but by thousands.

Mr. HUNTER remarked that dining out in restaurants, as was the practice in America and France, saved the space which would have been otherwise taken up by kitchens.

The vote was then put to the meeting by the President, and carried unanimously. Mr. Eales replied, and the proceedings terminated.

Messrs. T. & R. Boote, of Waterloo Potteries and Encaustic Tile Works, Burslem, have been awarded a gold medal for their exhibits at the Calcutta Exhibition.

## THE CASTELLANI COLLECTION.

THE well-known dealer in works of art, Signor Alessandro Castellani, died after a comparatively brief illness towards the close of last year. As soon as it was known that his collection would be sold, Prince Baldassare Odescalchi, from his place in the Chamber of Deputies, called the attention of the Government to the fact, and suggested the desirability of the State making the largest possible acquisitions at the sale. To this proposal a favourable reply was given by Signor Bacelli, the Minister of Public Instruction and Fine Art. A committee was then appointed to examine and report on the collection. The committee was composed of the directors of the principal Italian museums and other authorities on art, having for president the distinguished archæologist, Signor de Rossi. At the same time, the Syndic of Rome, Duke Leopold Torlonia, convened a meeting of deputies, which included Signori Minghetti, Baracco, Bertani, Cairoli, Crispi, Visconti-Venosta, Prince Belmonti, and Prince Odescalchi, to discuss the possibility of securing the collection for the National Museum. The result of the deliberations of the committee was a recommendation that the Government should anticipate the sale by purchasing the collection *en bloc*, if there was any possibility of such arrangement being made with the executors of the late Signor Castellani. It is computed that the total value of the works is between two and three millions of lire. The primary reason adduced by the committee in support of the demand for a grant from Government is the value of the finest examples of ancient art for elevating the taste of the modern workmen and thus assisting the development of the national industries. In the event of the Italian Government not coming to an agreement with the representatives of the family the sale will begin on the 17th instant and continue until April 10.

## THE NICE EXHIBITION.

THE Exhibition of Fine Arts at Nice has been described in an article by M. Louis Brès in the *Courrier de l'Art*. The opening has been an important event for that favoured province, and it is anticipated that the result will be an increased interest in art on the part of the visitors. It is the first attempt at an exhibition in Nice, and so far it has been a success. In some respects it differs from the ordinary provincial exhibitions of France, in which meritorious examples of art are lost in a crowd of commonplace works, and works which have been refused admission into Paris Salons. The aim of the promoters of the Nice Exhibition, on the contrary, has been to secure a collection of the selected pictures by French and foreign artists, and to present them in the most attractive way. The artists have cheerfully responded to the invitation of the committee, and for once quality and quantity have been united. There are about 3,000 pictures in the Exhibition, of which two-thirds are by French artists. They are distributed through sixteen rooms, nine of which are devoted to the French school.

The French works comprise 1,500 oil paintings, 300 water-colour drawings, designs, enamels, and miniatures; 200 pieces of sculpture, 100 engravings, and 50 architectural designs. In the foreign section Belgium and Italy are the principal representatives. The contributions consist of 650 oil paintings, 50 engravings and drawings. There are 376 works in sculpture—all of which have been sent from Italy. The French school is represented in a manner sufficiently complete. A large part of the work in the last Salons has been transferred *en bloc*. This fact gives assurance that the collection is modern, but it should be added that the selection has been made with intelligence. Among the French artists who have sent works to Nice are the following, viz.:—MM. Henner, Yon, Guillemet, Rapin, Français, Morot, Tattetgrain, Léon Comerre, Léon Gégé, Edouard Frère, Charles Frère, Jeannin, Dantan, Auguin, Binet, Emile Brisset, Brispot, Beyle, Feyen-Perrin, Delahaye, Bettannier, Jenoudet, Appian, Astruc, Couturier, Saint Pierre, Benjamin Constant, Geoffroy, Pelouse, Veyrassat, Carrier Belleuse, Harpignies, Paul Robert, Monténard, Pointalin, Robinet, Saintin, Vernier, Paul Sain, Perret, Moreau-Vauthier, Lagrand, Lesrel, Maillard, Allègre, Aublet, Beauverie, Benner, and Alphonse Moutte. The names of the principal Belgian and Italian painters appear in the catalogue, and among the other foreigners are Messrs. Smith Hald, Boggs, Ayrton, Bridgman, and Wyllie. In fact the Exhibition is a reunion of works of great interest, and although some Parisians may think there is little novelty in the pictures, yet as they are of real value and indicate the present condition of contemporary art, there should be pleasure in seeing them again. The exhibition building is situated on a plateau in the Quartier de Saint-Etienne, at a short distance from the railway station, and was erected in the course of a few months. The site is well adapted for the purpose, and has been laid out in a way that enhances the beauty of the place. The building is light and attractive in appearance, and its high towers, rotundas, sculpture and decoration, within and without, have been generally admired. The architect of the building is M. Sallé, M.M. Aublé Chacot and Halphen are the engineers, and M. Felix Martin is the director.



## NOTES AND COMMENTS.

IN the excitement which attended the completion of the designs for the proposed War and Admiralty Offices, it is not surprising that some competitors should overlook the order which fixed St. George's Porch as the rendezvous for the cases with the strainers. But through the oversight several sets of designs were refused admission. In some instances the sufferers can hardly be blamed. It was reasonable to assume that on such an occasion the clerk's office might be kept open for a few hours longer, and that it would be safe to entrust a case to the care of a railway or other carrier. If a sufficient explanation of the delay could be offered, it would be a kindness on the part of the First Commissioner to allow the excluded designs admission. The fewer the designs the better are the chances of the timely competitors, but we are confident that the majority of them would not demur to this proposal.

THE laying of the foundation-stone of the Glasgow Municipal Buildings has been a costly affair, for the expenses have amounted to 11,150*l.* 0*s.* 7*d.*, an enormous sum to pay for a day's glorification of a Council. The platform in George Square cost 3,391*l.* 7*s.* 7*d.*, and the arches and decorations 1,154*l.* 12*s.* 11*d.* The civic and masonic procession cost 112*l.* 1*s.* 2*d.*, but the trades' procession and platform is debited with 3,427*l.* 10*s.* 3*d.*, including the platform, which cost 3,366*l.* 5*s.* The outlay on the banquet was 1,181*l.* 9*s.* 6*d.*, and on a conversation 892*l.* 4*s.* 2*d.* The sum paid for fireworks was 600*l.* Lastly, there was an outlay of 390*l.* 15*s.* in general expenses. It is sometimes difficult to understand the reasons which guide the local authorities, and the expenditure of so large a sum may have been prudent. But when it is remembered that Glasgow needs buildings for an art gallery, an art school, and a public library, it certainly seems as if the Town Council were selfishly extravagant in their disposal of the public funds.

IT is fortunate that the works of the extension of the District Railway between the Mansion House Station and the Tower do not interfere with many buildings, for the navvies appear to be allowed to do as they like. One of the most important parts of the City is the region that lies between King William Street and Eastcheap. It was necessary to remove a few houses, and those which adjoin have been kept secure by means of counterforts of the kind that is usual in brick bridges over a country road. In the latter case the counterforts are concealed, but they are allowed to be visible in the City, and foreigners may well be amazed on seeing them. Their appearance suggests that the Corporation are still as indifferent as ever to the amenity of the City. The railway contractor is hardly to be blamed for getting through his work in the most economical way when he finds that there is no officer to control him.

THE Committee of Parisian Inscriptions has decided on placing a commemorative tablet at the angle of the Rue St. Denis and the Boulevard Sébastopol, to mark the site of the Grand Châtelet, the old fortified gate of the city of Paris and head-quarters of the Prévôts and Company of Notaries.

THE next exhibition of works by the Society of Painter-Etchers will be held at the Walker Art Gallery, Liverpool, and will open on Monday, September 1. All forms of engraving on metal, whether by the burin, the etching-needle, by mezzotint or aquatint, or by whatever other process the artist may choose as a means of original expression, are understood to be included in the term "painter-etching," and are eligible for exhibition, whether the artist sending them be a Fellow of the Society or not. All works sent for exhibition are subject to the approval of the Council; a Fellow of the Society, however, is entitled (by virtue of his membership) to exhibit two works without undergoing the censorship of the Council, contributions beyond that number being subject to approval in the usual way. Works sent for exhibition must be original. In the case of any which have been published, they must be restricted to those that have been published or exhibited since the last exhibition of this Society. All works intended for exhibition must be delivered (suitably framed) between July 21 and August 2, to the London agents of the Walker Art Gallery, and no charge will be made to contributors for carriage to and from Liverpool of works thus sent. Contributors may, how-

ever, forward their works (carriage prepaid) direct to Liverpool, addressed to "The Society of Painter-Etchers, Walker Art Gallery, Liverpool," where they will be received from July 21 to August 9.

JUDGMENT would appear to have gone by default in the case of the Glasgow ironmasters. It was alleged a few weeks ago that an undue proportion of cinder had been used as a constituent of the pig iron, and the ironmasters were indignant. The simplest way to ascertain the facts would be to apply tests to specimens selected at random. But letter-writing was substituted, and it may have been the wiser plan, for the revelations of a chemist or metallurgist must have made the case appear much worse. Messrs. CONNALL & Co., who have charge of the iron in question, were asked if they were in a position to deny the allegations; their reply is candid. "We have no knowledge," they say, "of the materials with which the furnaces were charged; nor do we suppose it was part of our duty as public storekeepers to ascertain this. We have two head warehouse-keepers of great experience in the handling of pig iron, whose daily duty it is to examine iron going in, and satisfy themselves that it is of fair average quality and number according to the brand stamped on it." A more empiric way of classifying iron it would be difficult to imagine. In the absence of Messrs. CONNALL'S "knowledge," the ironmasters made an attempt at investigation, and they have discovered that, during last year, from 25 to 45 per cent. of the furnace charge consisted of cinder in so many furnaces as to represent one-sixth of the whole production. If the inquiry will be followed up we may hear that the proportion is still larger.

IN the foundations of a house recently demolished in the Rue de l'Arc-Dugras at Nîmes a fine mosaic has been discovered. It is in the form of a rectangular slab, the subject apparently being *Endymion waiting upon Diana*. The shepherd is portrayed in dreamy repose at the foot of a tree, with a cupid hovering above and a dog lying asleep at his side. The inlaying is much finer than that of the ordinary *tessalata* found two months ago in the Rue St. Batilde of the same city, and the slab measures about 4½ feet square.

THE cost of the Market Hall of Burton-on-Trent has far exceeded the estimate. On the buildings and works the sum of 14,843*l.* has been expended, and the charges for architect and clerk of works bring the sum up to 15,783*l.* The site has cost 3,201*l.* The sum borrowed was 11,270*l.*, which was supposed to cover cost of building and site. An additional expense amounting to over 7,000*l.* has been incurred in connection with the building works. The opinion of the rate-payers and of the Local Government Board upon so large an addition has yet to be ascertained.

IT is expected that the Exhibition of Works in Wood will be opened in the new hall of the Carpenters' Company, about the middle of May. The two companies of the Carpenters and the Joiners have determined to invite British workmen generally to compete in the several branches of these crafts, and have offered a number of prizes, details of which can be had by application to the clerk of the Carpenters' Company. The number of responses received warrants the belief that there will be a good collection of articles of interest, of which a large number will be made for the occasion. It is also proposed to form a museum of every kind of illustration of both carpentry and joinery. The committee will be much gratified by receiving, merely for the purpose of exhibition, any models of drawings of existing or ancient works in wood, which would be of interest in showing the kind of work done both in the olden and the modern times. The exhibition will continue open for about three weeks, from eleven o'clock in the morning till five o'clock in the evening on four days in the week, and till nine o'clock on Wednesdays and Saturdays.

AT the solicitation of the Deputies and Town Councillors of the Gros-Caillou and neighbouring quarters, the Prefect of the Seine, in accord with the Minister of War, has granted leave for the creation of a racecourse on the Champ-de-Mars. The opening day, to be attended by the Prefect in person, is promised for next month, and the races will be held on Mondays and Saturdays.









32-10111 1/2 22. Kentish Lane. Cannon St. E.C.

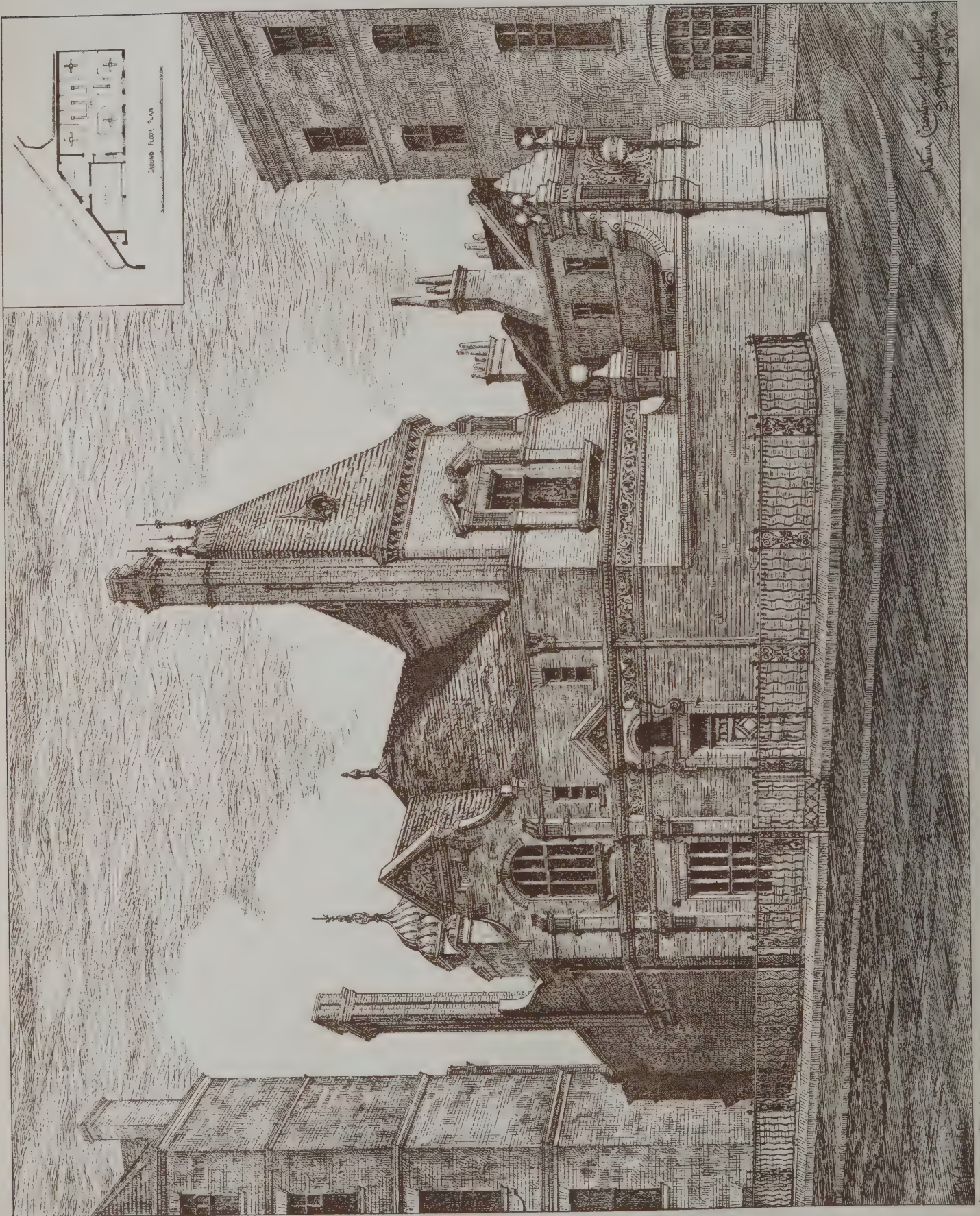
HOUSE, ALVECHURCH, WORCESTERSHIRE.

THE "TALBOT," OUNDLE.







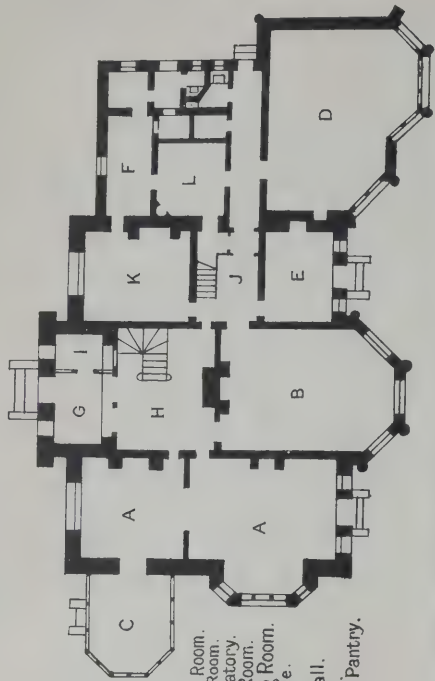


STABLES AT ASHBURN MEWS. SOUTH KENSINGTON.  
ARTHUR CAWSTON, ARCHITECT.

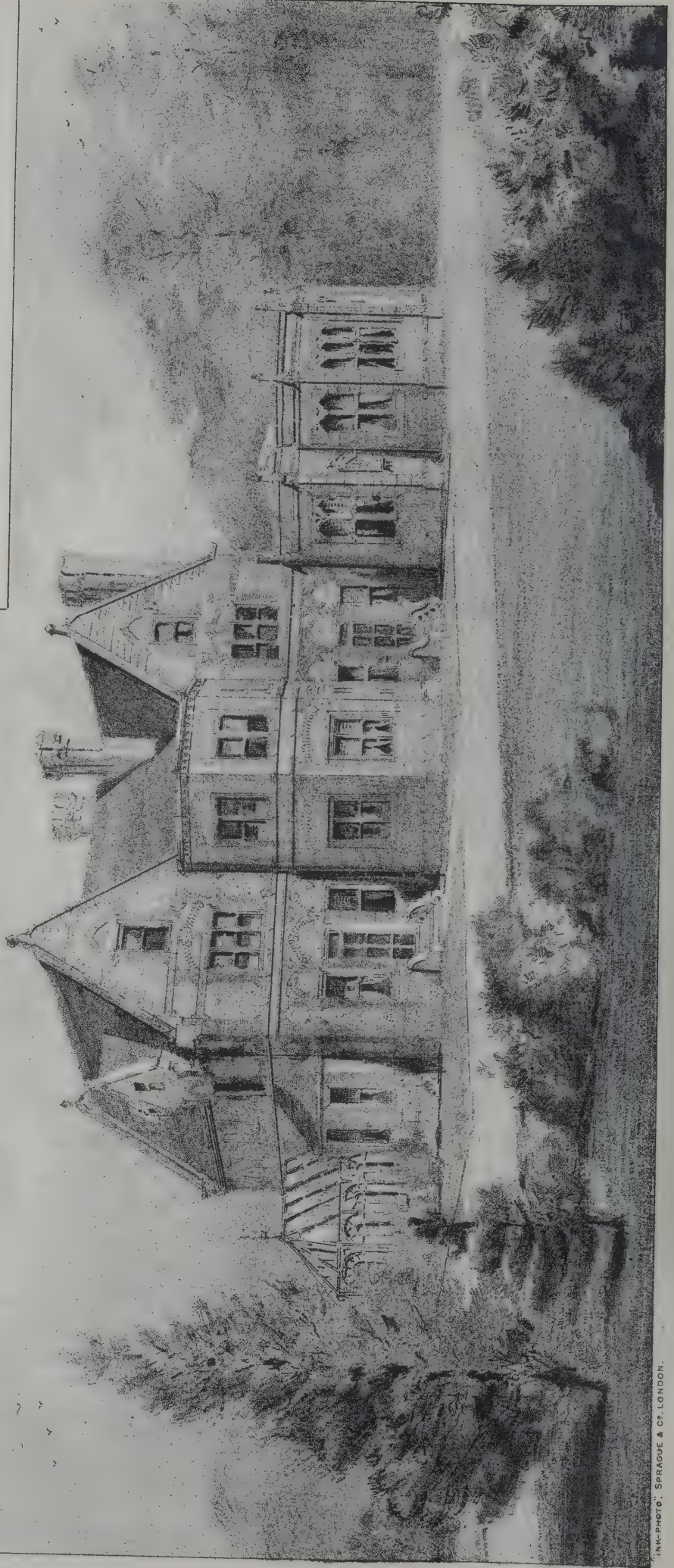








- A. Drawing Room.
- B. Billiard Room.
- C. Conservatory.
- D. Dining Room.
- E. Morning Room.
- F. Vestibule.
- G. Hall.
- H. Inner hall.
- J. Kitchen.
- K. Butlers Pantry.
- L. Butlers Pantry.



ALTERATIONS TO PARK HOUSE, SUTTON.

FOR: W. APPLETON ESQ.  
HERBERT D. APPLETON, A.R.I.B.A. ARCHITECT.





"INK-PHOTO," SPRAGUE & CO., LONDON

COLLYERS NEAR PETERSFIELD, HANTS.

MESSRS BATEMAN & KEATES, ARCHITECTS.









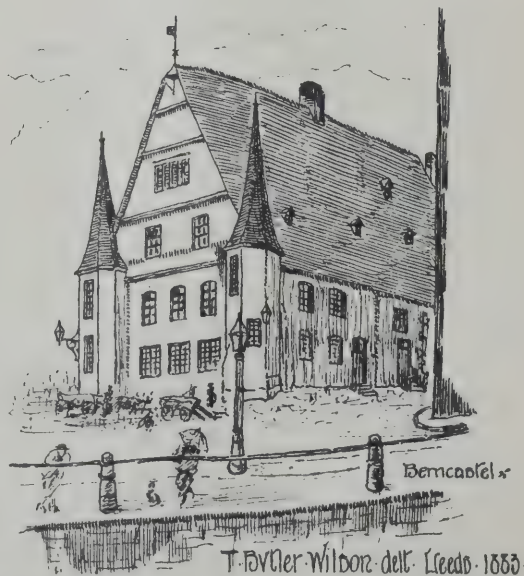
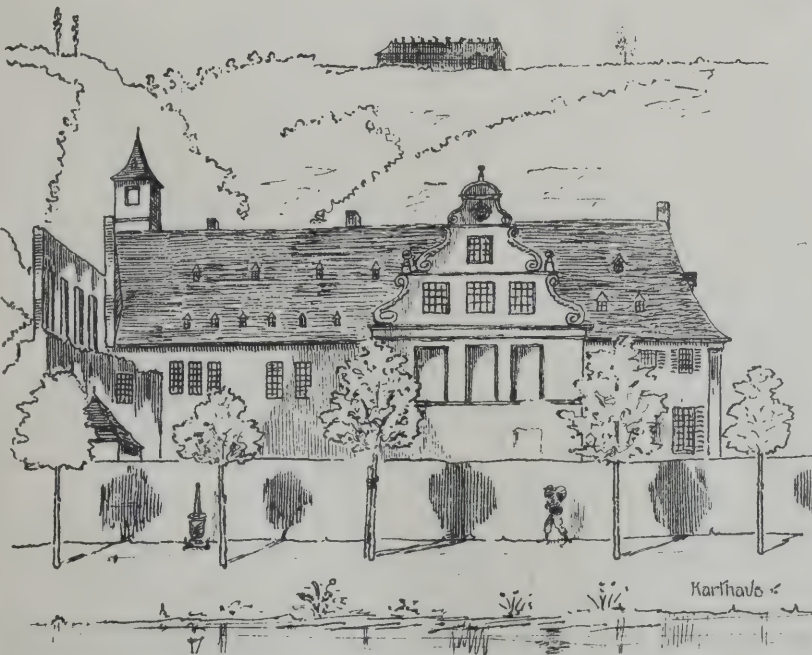
MUSIC & TEA ROOMS, LIVERPOOL ZOOLOGICAL GARDENS.

WILLIAM SUGDEN and SON, Architects.









T. Butler Wilson del. Leeds 1853.

Sprague & Co. 22, Martins Lane, Cannon St. EC.

# CONTINENTAL SKETCHES.

Drawn by T. BUTLER WILSON







## ILLUSTRATIONS.

COLLYERS, NEAR PETERSFIELD, HANTS.

THIS house, built for the late Lieutenant-Colonel SHUTTLEWORTH, is constructed for the most part of hollow brick walls, with rough-cast; but the front door gable (not shown) to the east is of best facing bricks, with Shawk stone dressings and sculptures. With the exception of the moulded bricks in the chimney shafts there is no manufactured ornament whatever; all is executed by hand.

The view given in our illustration is that of the south garden front, and shows—on the ground floor—the windows of drawing-room (on right), the verandah in front of the inner (and furnished) hall, and the library, which has windows also to the west.

The house contains five living-rooms, eighteen bedrooms, besides bath-room, &c., &c. The house is well situated, being sheltered from north and west, and commands fine views to south and east. It stands  $1\frac{1}{2}$  miles from Petersfield. The architects are Messrs. BATEMAN & KEATES, of 12 Nottingham Street, W.; the contractors, Messrs. JOHN CROOK & SONS, of Northam, Southampton; and the quantities by Mr. PETHER, of Essex Street, Strand.

The illustration is taken from a drawing which appeared in the last exhibition of the Royal Academy.

PARK HOUSE, SUTTON.

THE alterations to this building are being carried out from the designs of Mr. HERBERT D. APPLETON, A.R.I.B.A., of 157 Wool Exchange, Coleman Street. The walls are of dressed flints, with Douling stone dressings, and in some parts cut brick dressings. The dining-room has an oak ceiling. Mr. W. SMITH, of Eldon Works, Kennington, is the contractor, and Mr. J. COLEMAN clerk of works.

STABLES AT ASHBURN MEWS, SOUTH KENSINGTON.

THE stables shown in the illustration at Ashburn Mews, Gloucester Road, South Kensington, were erected last year from the designs of Mr. ARTHUR CAUSTON, architect, 9 Spring Gardens, S.W.

TEA-ROOM, ZOOLOGICAL GARDENS, LIVERPOOL.

THE illustration shows one half only of the restaurant block. The duplicate half extending west will comprise the restaurant proper and dining-hall, with cloak-rooms, service apartment, &c. The semi-quadrangle in front of these rooms will be planted with lindens in symmetrical order to form a sylvan promenade for *al fresco* concerts. The section illustrated contains the extensive tea-rooms for visitors, and the spacious hall for concerts, dramatic and other performances, public meetings, and use of the terpsichorean art. The sides of the room are fitted up as alcoves upon a dais, with a promenade gallery overhead communicating with an external balcony on the same level. All the highest points of the various structures will be illuminated by electricity.

This structure, like the other buildings in the gardens, will be carried out from the designs of Messrs. W. SUGDEN & SON, Leek.

CONTINENTAL SKETCHES.

THIS page is a companion to one lately published, which was also reproduced from sketches by Mr. T. BUTLER WILSON, of Leeds.

SKETCHES OF OLD HOUSES.

WE publish two sketches by Mr. F. W. FRANKLIN CROSS, the secretary of the Birmingham Architectural Association.

The house at Alvechurch, Worcestershire, is one of the many bits of half-timber work with which Worcestershire abounds. It stands on the declivity of a steep hill leading to the church, and it is a truly characteristic specimen of old Worcestershire.

Northamptonshire is rich in specimens of buildings of this style and date; but out of a folio of sketches made some years since, this one of the Talbot at Oundle has been chosen as one of the best, and admirably expressing its purpose. It is built of stone, and is covered with a thick grey slate, like many other buildings in Northamptonshire.

THE STANDARD LIFE ASSURANCE COMPANY'S BUILDINGS.

THE new building, of which we gave an illustration in last week's number, will shortly be in course of erection in King Street and Pall Mall, Manchester. The building is designed in the French Gothic style, the two principal elevations shown being constructed entirely of stone, the base being formed of dark polished Shap granite, and the external steps in Castlwellan granite, with polished risers and nosings. The roof is to be tiled, the windows filled in where shown with ornamental lead lights. The joiner's fittings on the ground floor will be executed in American walnut with ebonised mouldings, the ceilings being panelled in pitch pine, stained and varnished. Messrs. CLEGG, SON & KNOWLES are the architects, and Messrs. ROBERT NEILL & SONS the contractors for the works, which are to be completed in fifteen months from date of contract, at a cost of 9,989*l*.

## MR. LESSELS'S PICTURES.

THE fine art collection of the late Mr. John Lessels, architect, was brought to the hammer on Saturday in Dowell's rooms, Edinburgh. The most important pictures in the collection, which included a large representation of the late H. W. Williams—"Grecian Williams"—were two very fine water-colour drawings by J. M. W. Turner, R.A., both well known through engravings. One of these was *A View of the Rialto*,  $8\frac{1}{2}$  by  $5\frac{1}{2}$  inches, and the other *Berwick-on-Tweed*, 6 by  $3\frac{1}{2}$  inches. Both are beautiful examples of the refined art of the great colourist. The *Rialto* was started at 100 guineas and went up by fives to 225 guineas, at which figure it was knocked down to a Glasgow dealer. *Berwick-on-Tweed* began at 20 guineas, and was bought by an Edinburgh gentleman at 190 guineas. There was a third drawing by Turner—*A Scene in Warwickshire*— $7\frac{1}{4}$  by  $5\frac{1}{4}$  inches, but this being only a study and unsigned, went for 23 guineas. The following among other pictures were also sold:—

*Italian Street Scene*, by J. Holland, 26*l*. 5*s*.; *On the Esk—Painted from Nature*, by E. T. Crawford, R.S.A., 38*l*. 17*s*.; *On the Devonshire Coast*, by T. M. Richardson, 15*l*. 15*s*.; *Mountain Scenery*, by J. B. Pyne, 17*l*. 6*s*. 6*d*.; *Murano, in the Gulf of Venice, with a Prospect of the Friuli Mountains*, by W. L. Leitch (1847), 31*l*. 10*s*.; *View of St. Peter's, Rome, from the Borghese Palace*, by Andrew Wilson, 25*l*. 4*s*.; *View of Edinburgh from Hillside, Aberdour*, by H. W. Williams, 68*l*. 5*s*.; *Amalfi*, by J. B. Pyne, 31*l*. 10*s*.; *Castel-a-Mare*, by T. L. Rowbotham, 16*l*. 16*s*.; *Clovelly—Devonshire*, by T. M. Richardson, 21*l*.; *The Graves of the Clans*, by H. W. Williams, 15*l*. 15*s*.; *Scene in North Wales*, by T. M. Richardson, 31*l*. 10*s*.; *Cathedral Interior with Procession*, by J. Holland, 29*l*. 8*s*. A large number of works painted by Mr. Lessels himself were also disposed of. Among these was *A View on the Grand Canal, with the Church of St. Maria del Salute, Venice*, which brought 22*l*. 1*s*.

## THE GLASGOW MUSEUM AND ART GALLERIES.

THE following annual report has been presented to the Town Council:—

"Although the year 1883 had been marked by no exceptional event in the experience of the Museum and Art Galleries of Glasgow, it was satisfactory to note the report bore that these institutions continued to make steady progress, increasing in usefulness, and becoming better appreciated and more fully made use of by the public. The Italian Art Exhibition, which was opened in the Corporation Galleries at the close of 1882, was continued till the end of April. During that period it was visited by nearly 38,000 persons—a number largely in excess of that recorded in the case of the corresponding Oriental Art Exhibition of the previous year. Every facility was granted to encourage qualified art students to make full use of the collections. While the Italian Art Exhibition was in progress in the Galleries the committee experimentally organised a small local exhibition in the Bridgeton district of the city. For this exhibition the conveniently-situated hall connected with the Eastern District Police Buildings was kindly placed at their disposal by the Magistrates and Town Council. The exhibition, which was open fifty-six days, from February 20 till April 24, was exceedingly popular in the district, and was visited by 63,585 persons. The additions to the Technological and Natural History sections of the Museum were not so considerable as they have been for some previous years, although the list shows many valuable and interesting donations. In continuation of the series of annual exhibitions of decorative art the committee during the autumn took steps to organise a loan collection of French decorative art. The collection was opened to the public on December 20, with every prospect of being as well appreciated and as useful as any of its predecessors. The number of visitors to the Museum



and Galleries during the year amounted to the large total of 321,797 visitors, and adding that to the attendance at the Eastern District Temporary Exhibition, it was found that no less than 385,292 persons visited the exhibitional institutions under charge of the committee during the year. The number of qualified students to whom copying tickets for the Galleries were issued was fifty, and by such students 682 visits were paid to the Galleries for the purpose of copying from the pictures, &c. These figures show a large increase over the returns of the previous year, and this growing utilisation of the Galleries for the purposes of study was one of the most pleasing features of the recent experiences of the institution."

### REBUILDING THE BELGIAN CHAMBERS.

THE Committee of Deputies appointed to examine the plans of the architect, M. Beyart, for the reconstruction of the Belgian Chambers, have adopted them. The façades of the building will agree with the original design made in 1784. Besides many other changes in the interior, the hall of meeting of the Chamber will be considerably enlarged, and the number of available seats for the members will be increased from 144 to 175. The Chamber numbers 132 members, but periodical additions have to be made to their number in proportion to the increase of the population. The Constitution provides that every 40,000 of the population shall be represented by a member in the Chamber, and every 80,000 by a Senator. The Ministers, seven in number, will have a bench to themselves, separated from the seats of the other members. The fire having injured the large marble statue of Leopold I., which adorned the hall, a new statue of the founder of the Belgian dynasty will be placed there. The library of the Chamber will be completely separated from the rest of the buildings. The reporters' gallery will be much enlarged. All possible precautions against the danger of fire are to be taken. The cost of the new building is estimated at 3,000,000 frs., and its completion will require about two years.

### EDINBURGH ARCHITECTURAL ASSOCIATION.

THE members of the Edinburgh Architectural Association paid a visit on Saturday afternoon to three places of historical interest in the suburbs of the city. Notwithstanding the unfavourable weather, a numerous party assembled at Grange House, the property of Sir Thos. Dick Lauder, but at present leased to Mr. and Mrs. Nutt for a ladies' boarding-school. The "dog's cemetery," near the entrance gate was first visited, and a short time was spent in deciphering the epitaphs on the tombstones which mark the burial-places of some favourite specimens of the canine race. Proceeding to the mansion-house, Mr. G. Washington Browne, architect, who conducted the party, gave a few historical notes of the place. The name of "Grange" as applied to the district was, he said, derived from its having been the site of the old granary, or "grange," of St. Giles's Church. Maitland, in his history, accounted for the name by its having been the granary of the convent of St. Catherine of Sienna, now corrupted into Sciennes; but he (Mr. Browne) believed that to be an erroneous inference. Mr. Browne traced the history of the Grange, showing that the property was in the hands of the Cants up till 1607; in 1679 it came to Wm. Dick, through his marriage with Janet M'Math, and it was acquired by the Lauder family by the marriage of Miss Dick with her cousin, Sir Andrew Lauder of Fountainhall. The company were conducted through the principal apartments of the house by Mrs. Nutt, who explained the most interesting of the fine old paintings which adorn the walls. Prince Charlie visited the house in 1745, and danced with the Ladies Seton, whose portraits hang on the staircase. Among the quaint furniture, which was examined with interest, is a hall seat, the back of which is formed of what is said to have been the head of Cardinal Beaton's bed. Before leaving the house a visit was paid to the room in which Robertson, the historian, died. The company then proceeded to Craig House, which is now a convalescent home in connection with the Royal Asylum for the Insane. They were there met by Dr. Clouston, and shown over the apartments. In the course of some remarks on the building, Mr. Browne drew attention to the date, 1565, over the entrance door, with the initials "L. S. C. P." Whose those initials were, or who had built the house, he had been unable to find out, but from its structure it was evidently intended for a residence rather than a fortified place. The northern wing was presumably added in 1746, by Sir James Elphinstone, whose name was carved on a scroll over the coat of arms above the entrance door to that wing. The late John Hill Burton had his library in that wing, and is understood to have written his "History of Scotland" there, but the room has now been subdivided and modernised. The company next visited Merchiston Castle, where they were received by Dr. Rogerson. Mr. Browne said it was not quite clear whether the building was in existence before 1438, when it was in the hands of the Napiers. That it was of earlier date was supposed by the name it then bore, viz., the King's House. Whatever its date, it was certainly

built as a stronghold, the walls being very thick, one of them measuring 10½ feet. The first three Napiers were Provosts of Edinburgh, the second was Comptroller of Scotland under James II., and Ambassador to the Court of the Golden Fleece in 1473; the third founded a chaplaincy and altar to St. Salvator in St. Giles's Church in 1493; the fourth was killed at the battle of Pinkie in 1547; the fifth fell on Flodden Field; and the lineal descendant of the family was the present Lord Napier and Ettrick. The company were shown through the castle by Dr. Rogerson, and saw the room in which John Napier, the inventor of logarithms, laboured.

### THE TEACHING OF DESIGN.

THE annual meeting of the Macclesfield School of Art was held on the 4th inst. According to the report the school, in 1880, stood forty-sixth in order of success, in 1881 sixteenth, in 1882 eighth among 182 schools, and in 1883, in number of awards, it takes the seventh position out of 191 schools. In 1882 Macclesfield for the first time gained the honour of an award of a gold medal, in 1883 it has again obtained one gold medal out of the twelve awarded, and in addition five out of the fifty-eight silver, five of the 103 bronze medals, and two of the 201 book prizes awarded; in other words, thirteen out of a total of 364, or one 1-28th of the whole number. At the meeting speeches were delivered by the chairman of the school, Mr. May, Sir P. Cunliffe Owen, Mr. Scott, headmaster, and others.

Mr. Henry Birchenough, M.A., said there were many points in the report which could be touched upon. He would, however, confine himself to one or two of special interest. And, in the first place, with regard to design. That seemed to be the strongest point. The secretary had told them in his report that, taking the value and the number of designs together, the Macclesfield school stood first in England in designs. That was a very high position to have attained. Masters and students had worked under conditions which are in many respects very unfavourable. The teaching was good; they were all agreed upon that; the students were intelligent and possessed of much originality. They had only to examine the works they have executed during the past session to be convinced of that. But teaching and intelligence alone would not make designers. What was above all needed was well directed experience. And it was in affording the students the means of gaining such experience that they were weak. If asked for designs for a rich silk hanging, or for an elaborate embroidery, such as those Mr. Nicholson produced with such admirable skill, what experience had they to help them? How many of them had ever seen hangings falling in lovely folds in house or palace—how many of them had ever seen embroideries covering table or couch? The most that could be offered to them were scraps and tatters of brocades of a bygone time, which were exhibited in frames. He did not wish to disparage these; they were all they had. He was pleased to hear that the energetic master, Mr. Scott, took some of the students down to Manchester last week to see the collection of stuffs there. That was all to the good, but it clearly was not enough. It had been truly said that "Design is not the offspring of happy chance." Designs do not grow in our students' heads like cherries grow upon cherry trees. The art of designing is slowly acquired by patient observation and laborious experience, and no amount of teaching and lecturing and prize-giving would make designers of students, unless we surround them with conditions proper to their studies, and unless we offer them the best examples to follow. They all knew how ugly our workshops were with their endless monotony of blank whitewashed walls; that our streets are not beautiful, homely and pleasant as we may perhaps find them. They knew, too, how few opportunities our students have of visiting the interior of beautiful houses. And, therefore, any influence which had to be brought to bear upon them must be excited within these four walls. He did not ask them to at once turn that building into a palace. They had not the money to do it, and if they had, we should require it for more pressing needs. But he confessed he should like to see it so beautiful and adorned that the change of surroundings in passing from workshop to school might be as great as possible. He did not think that they could ever over-estimate the influence of surroundings upon art work. And, most of all, he should like to see the school endowed with a collection of the good and admirable work of the designs of past ages, and that students might be able at all times to see what had been done, and therefore what can be done, and to seek for their inspirations in the noble work of the past. Last year he was in Berlin, and visited there the Arts and Trades' Museum. It is a museum which has been founded upon the model of South Kensington by the personal efforts of the Crown Princess. He asked particularly to see the stuffs—the silks and embroideries. He was shown into a small admirably-arranged room, filled with closed cases or cupboards. The director asked him what period of design he wished to see. He said, quite haphazard, "the seventeenth century;" whereupon he opened a case and showed him more than a hundred examples of work of that period. And so with the fourteenth, fifteenth, six-



teenth, and eighteenth centuries. All the designs were arranged according to their period, so that the whole could be studied historically. He should like to see that institution endowed with some such collection as that, for they had arrived at that point in the history of the school when they did not need so much to improve the teaching or to seek for better endowed pupils, as to surround those pupils with better conditions, to offer them better models to study, and to change and refine their school life. It was clear that if we keep our designers ignorant and inexperienced, in the midst of evil surroundings, they would give us bad designs, but if we educate them and refine them, if we hold up to them the best and highest examples to follow, and point out to them the noblest ends to attain, their designs would repay us by their beauty, their originality, and their refinement.

### THE NEW OXFORD HOSPITAL.

A MEETING of the Oxford Local Board was held on the 5th inst., when it was reported that the plans for the proposed Infectious Diseases Hospital had been approved by the Local Government Board. The Committee recommended that 10,000*l.* should be borrowed, and that Mr. White, the Board's surveyor, should be employed to take out the quantities and superintend the work as architect, at a charge of 2½ per cent. on the total outlay, it being understood that the quantities be taken out at other times of the ordinary business hours, and that any assistance required by Mr. White in his capacity as architect be provided at his own cost. In order to prepare the plans with due despatch the Committee found it necessary in November 1882 to engage the services of a draughtsman, although the appointment was not reported to the Board at the time. The Chairman said that as Mr. White had had all the trouble of making the plans originally, it would be fair to put the carrying out of them in his hands, and as a matter of economy the employment of Mr. White was desirable, as it was an extremely insignificant percentage which was mentioned in the report, and the Board would be saved some hundreds of pounds on that head. Mr. Laker said the surveyor was bound to prepare plans, estimates, and specifications for any new buildings as part of his duties. He moved as an amendment that the commission of 2½ per cent. to be paid to the surveyor of the Board on the occasion of erecting a fever hospital be postponed until after the report of the Executive Committee, who have now under consideration the important changes in the surveyor's department. Mr. Embling said that when the surveyor obtained an increased salary they were told that Mr. White knew more than an ordinary surveyor, and they were to have the benefit of his knowledge. He protested against paying a man extra for work which it was his duty to carry out. On a division seven members voted for the amendment, and sixteen against it.

### THE GOTHIC REVIVAL.

THE second lecture on "The Gothic Revival" was delivered by Mr. William Morris on Monday night, at the Midland Institute, Birmingham. Having recapitulated the points of his preceding address, he spoke of the ally that came to the study of the arts in the movement in the English Church, which has since got the name of Ritualism; but which, he thought, might be put down, on the whole, as part of the general tendency to protest against the blank stupidity of the eighteenth century. Gothic art began to receive a great deal of attention, and to vindicate its title to ecclesiastical art, or Christian art, as Pugin, with little more logic, used to call it, by getting itself used as an imitative style for the building of churches—at least in England—people not seeing, as they did not altogether see to-day, the queer incongruity of building their houses in one style, and their churches in another. One luckless result of this alliance of quasi-art with quasi-theology was the mishap expressed by the word restoration, which wrought the most frightful ravages while people's ideas about, he would not say the essence, but about the mere differentia of Gothic art, were very crude indeed. There was something quite sickening to a lover of art, to think that an ancient building, a lovely piece of art in itself, the growth of the very soil of the country, the outcome of so many centuries of thought, the witness of a state of society and methods of handicraft long passed away, after having escaped so many dangers of change, and accident, and violence, and lapse of time, should be liable to sudden and violent destruction, brought on by whim arising in the head of a half-educated man, who had not grasped the fact that the workmen of to-day are in a different position to those of the Middle Ages. In the next act of the revival it began to be perceived that the style was founded on principles, that it had a life and spirit in it, and, as a matter of course, that it was adapted, not only for ecclesiastical buildings, but for all buildings. This perception was helped on by the growing study of foreign Gothic and kindred styles, especially by the study of the architecture of Italy, guided by Ruskin's unrivalled eloquence and wonderful ethical instinct. The subject was considered scientific-

cally, and people formed the hope of founding a new style of architecture on the vigorous organic period of Gothic. Even in this act, however, the foe Restoration came in, and men, in their enthusiasm for purity of style, saw nothing worthy of preservation after the fourteenth century, and destroyed later work which no age of the world could have afforded to lose, supplanting it by feeble copies of earlier work. With the third act of revival came greater and more intimate knowledge of the art of the Gothic period, and withal a greater knowledge of the conditions of life at that time. Imaginative painting, too, benefited by this stage of the revival. Out of this third act of the revival we might be said now to have passed into the fourth, which had strengthened the hope of many people that a new style of art was forming which would be at once beautiful and fitting at the same time to the life of our own time. Strange to say, there had been amidst all this a reaction which had found expression in a return to the whimsical ghost of a style of the eighteenth century, which owed whatever was admirable in it to a survival of the Gothic times, all the rest being mere inanity and tokens of a narrow-pitched bourgeoised one. The lecturer deprecated for the present extensive ornament, because he considered it worth nothing, except done by an artist, and artist's work was, under present conditions, expensive. He described the conditions under which a mediæval craftsman worked, each man being master of his time, free to give his whole thought and imagination to his work, and in fact an artist; while the workman of the present day was, by the present competitive system, compelled to work by pattern, and could not linger over his work. Those who expected to see a living school of art amongst us must make up their minds to one thing, that their cultivation would not help it forward one whit unless it was shared by all men. And if they thought that that was an easy thing to bring about, they were wrong. The present division between upper and lower classes, rich and poor, was necessary for the existence of the present commercial capitalist system, while at the same time it entirely forbade that universal cultivation, ease, and leisure, which alone could produce popular art. But if art was not popular, it was not of the people, it was an idle and worthless toy. Therefore, the progress—nay, the very existence of art—depended on changing the basis of society. Art was not a little thing; it meant the pleasure of life. It was a question between barbarism and civilisation; nay, between progress and corruption, between humanity and brutality—he was wrong there, for the brutes were at least happy, but men without art would be unhappy.

### THE BERMUDA CATHEDRAL.

ON Sunday morning, February 27 last, Trinity Church, Bermuda, the pro-cathedral of the colony, was entirely destroyed by fire, supposed to be the work of an incendiary, as there was no heating apparatus or inflammable matter, not even lucifer matches, kept in the church. The fire was first observed by a groom who lived opposite the church. He had passed the building on his way home from some duty at a quarter past four that morning, and saw nothing amiss about the building. He went immediately to bed, when he heard a crash in the direction of the church, and when he looked out saw flames issuing from the roof and from the tower in several places. He rushed to an isolated bell-turret to give an alarm, but found the bell ropes cut, and on running to rouse the sexton who lived near, he encountered a "white man" without his hat, who asked him why he did not save the books. The "white man" was running from the church, and immediately disappeared. No human effort could then have saved the building. The whole of the woodwork was consumed in two hours. The remains of the walls are shattered in many places. The fire is supposed to be the work of an American Fenian, or of some Puritanical bigot. The building was a very handsome edifice, in the Early English style of Gothic architecture, built of the fine white coral stone of the islands. It was completed about twenty years ago from plans by Mr. William Hay, architect, Edinburgh, of the firm of Hay & Henderson, 17 Hill Street (the restorer of St. Giles's Cathedral). After some fifteen years previously spent in building operations, from the difficulty chiefly of procuring skilled labour in the islands, Mr. Hay twice visited Bermuda, with the late Bishop Field of Newfoundland, to give an impetus to the work. The church consisted of a nave, eight bays in length, a large central tower, two transepts, a choir or chancel, of a total length of about 175 feet. It had north and south porches, vestry, and western entrance, deeply recessed with gabled penthouse over the arch. The gables of the nave, choir, and transept were perforated with tall lancet windows, four on the west end and three on each of the others. These and the other windows of the church were filled with valuable stained glass (chiefly memorial) by the best artists in England. The choir, or chancel, was roofed with the red cedar of the country, now scarce, and more costly than the best mahogany. The nave and transept roofs were of pitch pine. These roofs were 40 feet from the floor to the top of the clerestory wall, and it is almost incredible that fire could have reached such a height if kindled on the floor. It is supposed the organ, which



was lofty, had been used as the vehicle of communication. Active efforts are already being made to raise funds for restoring the church, and several large subscriptions have been received from the principal inhabitants of the islands. The Bishop of Newfoundland, to whose diocese Bermuda is attached, is to make an appeal to the public, which is expected to be largely responded to. The amount required will probably be from 15,000*l.* to 20,000*l.* Up to the time of the mail leaving no arrests had been made, nor does there appear to be any sufficient clue to the discovery of the perpetrator. At this season many respectable Americans visit the islands for the sake of the mild winter climate, and it would be easy for one black sheep to escape detection among so many strangers.

### THE FORESTRY EXHIBITION IN EDINBURGH.

THE Executive Committee of the International Forestry Exhibition had two questions before them at their late meeting in Edinburgh, viz., the questions of advertising and electric lighting. The reserve price for the outside page of the catalogue of the Health Exhibition, London, is placed at 1,000*l.* Last year it was leased for a sum of 500*l.* The applications for space, especially from the Colonies, come in apace, and cannot be separately noted. Their Excellencies at the head of the Colonial Governments abroad have accepted the invitation to become members of the general committee, and Baron Oscar Dickson has also consented to join. In addition to essays on various subjects connected with forestry which have been freely offered, a course of lectures by eminent professors of the science of forestry in various countries has been arranged for during the continuance of the exhibition. The committee are now in possession of the details of the contributions they may expect to receive from India. The general Government collection will embrace, first, a series of forest maps, prepared at the Forest School at Débra Dun, which show the progress that has been made in the last fifteen years in the demarcation of forest reserves and surveys of the Himalayan and other hill tracts; second, an index collection of 800 varieties of the different timber trees found in India. Besides this, each local government will contribute any remarkable forest products peculiar to their respective provinces. From the exhibition which is to be held in Travancore in April, His Highness the Maharajah proposes to pass on the collections specially pertaining to forestry. There are many specimens of Indian furniture and carved wood in this country, which the owners have intimated their willingness to send for the purposes of the exhibition; and the planters of tea, coffee, cocoa, cinchona, &c., in India and Ceylon propose to send samples of the produce of their estates. By these combined efforts we may expect that the Indian Court, the charge of which has been entrusted to a Special Commissioner, will contain a fitting representative collection of the forest wealth of our Eastern empire.

### UNIVERSITY COLLEGE, NOTTINGHAM.

AT the meeting of the Nottingham Town Council, which was held on the 3rd inst., Ald. Cropper moved the confirmation of a report from the University College (Defects) Committee upon the defects in the University College building. He said that the specifications had not been carried out. The proposition that he had to submit to them was this. Was it reasonable, was it honest, that an architect who received ample commission for the designing and erection of certain premises should be permitted to delegate his responsibility to a foreman carpenter at 30*s.* or 40*s.* per week? That was precisely what the architects had done. That was the point they asked the Council to submit to the arbitration of a competent authority. There were admissions that the plans and specifications had been varied, while the Corporation were recommended a certain stone to be used which was not suitable for a boundary-wall. They had paid for skill and supervision, and had got neither to the extent which they had a right to expect.—Mr. Fitzhugh seconded.—Mr. Young stated that the building was in such a deplorable condition that he was told that in ten years' time the building would tumble down unless something very urgent was done. He also wished to know whether the clerk of the works was not appointed by the Corporation, and whether he was not responsible to the Corporation.—Mr. Vickers said that they had a claim against the architect and not against the clerk of the works.—Mr. Bayley wanted to know what they were going to arbitrate upon. If there was to be an arbitration he thought it had better be referred not to an architect but to a civil engineer.—Mr. J. Robinson commented upon the great expense of arbitrations. He thought that they had had enough of them.—The Town Clerk said that Mr. Mawson was willing that that should go to arbitration, the assessor being an expert, and that there should be no counsel or solicitors, and that the whole thing should be done as cheaply as possible.—Ald. Goldschmidt objected to members of the Council trying to force the hands of the committee in such a delicate matter as that.—Mr. Jacoby said that it was shocking, after having paid 75,000*l.* on that building, that it should be found defective already. There was blame somewhere, and the only way to find

that out was by arbitration.—Mr. Walker was of opinion that the clerk of the works was their own servant, and the verdict would be against them.—Mr. Gregory, Ald. Dennett, and Mr. Renals also spoke, while Mr. Fraser said that if the Corporation had not a strong case they had better let the matter drop at once.—Mr. Browne said that all the objections raised that morning had been discussed in committee.—Mr. McCraith and Mr. Brewster also referred to the report, the latter observing that they should arbitrate on the question of amount only.—The report of the committee, after the reply of Ald. Cropper, was unanimously adopted.

### INTERNATIONAL HEALTH EXHIBITION.

THE Council of the Society of Arts announce that they are prepared to award the following prizes in connection with the International Health Exhibition:—Under the John Stock Trust, a Society's Gold Medal or 20*l.* for the best example of sanitary architectural construction, Classes 20, 28, 29, 30, 32. Under the Shaw Trust, a Society's Gold Medal or 20*l.* for the most deserving exhibit in Classes 41, 42, 43, and 45 (relating to Industrial Hygiene). Under the North London Exhibition Trust, a Society's Gold Medal or 20*l.* for the best set of specimens illustrating the handicraft teaching in any school, Classes 49 and 50. Under the Fothergill Trust, Two Gold Medals (or two sums of 20*l.*), one for the best exhibit in Class 27 (Fire Prevention Apparatus), and one for the best exhibit in Class 26 (Lighting Apparatus). From the Trevelyan Prize Fund, Five Gold Medals (or five sums of 20*l.*) for the best exhibit in each of the following Classes—2, 3, 6, 7, and 11 (all comprised within Group 1, "Food"). Each prize will be a Gold Medal, or the sum of 20*l.*, at the option of the recipient. The Council propose to ask the juries in each class to recommend for their consideration either two or three exhibits which they might consider deserving a prize.

### SOME NINETEENTH-CENTURY ARCHITECTS.\*

By PROFESSOR T. ROGER SMITH.

(Concluded from page 157.)

*George Edmund Street.*

THE name of George Edmund Street is one which it is quite impossible to omit, but which I feel I can only deal with in a very general and incomplete manner, so comparatively recent is the date of his decease.

Mr. Street—who was first known as assisting Sir Gilbert Scott in his work—when he began practice on his own account, owed a good deal of his early success, as has always been understood, to the friendship of the late Bishop Wilberforce, then Bishop of Oxford, who appreciated his talents and his energy. The Bishop himself gave him commissions and the post of diocesan architect, and introduced him to work in the diocese. Street soon became known both by his buildings and his draughtsmanship, and it is probable that the wonderful pen-and-ink drawings from his own hand, which he exhibited year after year at the Royal Academy, did not a little to increase his practice; they certainly extended his reputation among architects, and they were mainly instrumental in bringing about the revolution in draughtsmanship which has been witnessed during the last twenty years, and which the invention of photolithography has stimulated. Formerly an exhibition drawing was almost invariably a carefully-prepared outline; coloured very often by a different hand to that of the outliner, and sometimes, one must admit, tinted without too much regard either to truth or to architectural propriety. Street introduced, or if he did not introduce, he was one of the first to adopt, pen-and-ink etched drawings, outline, features, and shading all done by one hand at one time; and he succeeded in imparting to this work a sweetness and evenness of tone and a charm of touch that no other artist has equalled. These drawings seemed often to have been done with a liquid writing-ink of a slightly blue tone, and on a paper with a hard surface. They all bore marks of rapid execution, sometimes of haste; but the drawing of the features was rarely, if ever, distorted, and the air of ease and perfect mastery of the subject, and of the materials, which they displayed, reflected truly enough the conditions under which they were produced.

Street was very faithful in his adherence to pointed architecture, and very successful in adapting it to simple buildings. His small parish churches, and his plainer monastic buildings, built under circumstances where outlay had to be restricted, are full of genuine mediæval simplicity; and no one knew better how to raise a structure from the level of a mere barn to that of an interesting domestic building by the skilful use of a few well-designed mouldings, and the addition of one or two charming pieces of tracery introduced exactly where every touch would tell most. His more ambitious works were successful also; but so far as I have had

\* A Paper read at a meeting of the Leeds Society of Architects.



opportunities of judging it has seemed to me that it was in his simple buildings that he stood unapproached.

Street was an enthusiastic student of his art. The books which he published—"The Brick and Marble Architecture of Italy" and his volume on "The Gothic Architecture of Spain"—both bear witness to this. Few books exist that are better models of what an architect's note-book on a tour of study ought to be; and there is at least one excellent paper among the Transactions of the Institute of Architects, giving an account of the architecture of Auvergne, in Central France, which I well remember hearing him read. It gives an admirable summary of the peculiarities of that interesting region, and it was illustrated by a wonderful series of sketches, the dates on which showed that he must have been extraordinarily rapid as a sketcher.

Street was a man of great energy and unusual self-reliance. His method of working, as is well known, was to put everything in pencil himself, employing his assistants to ink in and colour, or to repeat features of which he fixed the form, and this he adhered to down to his death. The consequence of this, of course, was that all his work is marked by his own peculiarities and qualities to a greater extent than that of most men; but, at the same time, an amount of labour and wear and tear was entailed of which some might have been spared, nor is it too much to say that this method of work helped to kill him before his time.

Street is, of course, best known as the architect of the Law Courts, and in this building the powers of the architect were more severely tried, and a greater opportunity was left open for his ability, than in the case of any other architect whom we have had to mention, with the single exception of Sir Charles Barry. It is too soon yet to anticipate the verdict of the mature judgment of Englishmen generally on the Palace of Justice; but so much has been said against it in some quarters that, without attempting to pass a critical opinion on the building, I may be permitted to point out one or two matters connected with it. The general disposition, which is naturally the first thing that strikes us, is far more the child of the Commission who prepared the scheme for the concentration than of the architect. It should always be borne in mind that in no competition have the requirements been more minutely set forth than in the one which resulted in Street's design being adopted; and the system of isolation, which has been arranged so as to the utmost extent to cut off the judges, the bar, the solicitors, the witnesses, and the general public from one another, is the result of the deliberate judgment of the Commission. It has been a good deal objected to; but it is so different from the unseemly jumbling up of everybody which was witnessed in Westminster Hall that its true effect cannot be appreciated at once, and it will probably be found in the long run advantageous. A more serious ground of complaint arises from the difficulty of reaching different departments; but this is largely due to the fact that far too much accommodation is compressed on to the site for it to be possible that it should be accessible without numerous staircases. Probably the most efficient and serviceable public building in London is the Bank of England, where all the departments are on one level, and where there is hardly such a thing as a staircase or an upper floor accessible to the public. Had sufficient money been spent to enable the architect to spread the courts and their appendages over the whole of the site that has been cleared, instead of concentrating them as has been done, the most serious defects alleged against the structure for business purposes, including in places a want of light, would have to a great extent been obviated.

Of the exterior, which all of you can see for yourselves when you visit London, you are all competent to form a judgment, though I should like to point out that it invites and deserves long and patient scrutiny; but I cannot forbear reminding you, as architects, of the interior, which some of you may not visit, especially the unrivalled vaulted hall, the like of which does not exist in Europe; of the endless variety introduced into the features and roofing of the different courts; of the beauty of the lead lights, carving, metal-work, and other decorative accessories; and of the great variety to be met with in the mouldings, capitals, spandrels, strings, and other such features—a variety obtained without any loss of harmony. I ought also to point out what every experienced architect may verify for himself: the economy, I had almost said parsimony, with which such finishings as can be spared—such as skirtings, linings, &c.—are avoided in the plain parts of the building, though good material, and durable, is employed throughout; and the liberality with which, in those parts intended to be rich—as, for example, the courts and the hall—both materials and workmanship are freely employed. I should like also to bespeak your attention to the staircases, picturesque and ingenious; the great *flèche*, which is by far the finest modern structure of this sort of modern work in England; and especially to the variety and beauty of the vaulting. This mode of roofing dignifies a building more than any other, and in vaulting this great hall Street has done more to render the whole structure monumental than anything else could have accomplished. The vaulting is not, however, confined to the hall, but in many of the corridors and lobbies fine specimens of vaulted construction are to be found, such as it is a pleasure to examine.

The architect of this great work was, as you all know, a

member of the Royal Academy and President of our Institute at the time of his lamented death. Street was personally a man of commanding appearance, strongly built, and with an air of vigour and power; he was undoubtedly a leading spirit, and was lost to architecture at a time when his friends hoped that many years of active life, with all the weight of his great influence, might still be left him in which to pursue the profession he loved.

#### *William Burges.*

William Burges was one of the greatest artists and best antiquaries whom the Gothic revival produced. He had educated himself with great care and thoroughness for the practice of his profession; he had travelled far and wide; he knew probably as much of mediæval archæology as any Englishman of his day; he acquired a thorough knowledge of jewellers', goldsmiths', and metal-workers' work, of decoration, stained glass, sculpture, and, in short, of every art or appliance that could contribute to the excellence of a building; he sketched much and measured more, and he had a fertility of invention and a power of design which few have surpassed.

His first great success was won by competitive designs which he and Mr. Clutton sent in jointly for the Cathedral at Lille. These were extremely fine, but probably might not have been successful had not pains been taken to write to them and figure them in French and in French handwriting. The competitors took them over to France, carefully removing all English marks and labels from the package, and the result of these precautions was that, till the adjudication had been made and the envelopes with the names opened, no one had a suspicion that the architect was not a Frenchman. I believe it was from this set of drawings that M. Didron selected a design by Burges to engrave and publish, as being one of the most complete and correct examples of Christian iconography which he could put before the readers of the archæological journal that he issued. Messrs. Clutton and Burges were not, however, so fortunate as Mr. Scott was at Hamburgh; they could not get the cathedral to build, and had to content themselves with the premium.

Work did not at first come in fast, though Mr. Burges's name and fame as an artist gained a great repute. He obtained the first premium in the competition for a memorial church at Constantinople, but difficulties rose about the execution of the building, and this success brought more honour than profit. He executed, however, a good deal of work of importance, such as Cork Cathedral, the Bombay School of Art, the restoration of Cardiff Castle, and of Waltham Abbey, and several churches of great beauty and fine character. The stained glass that he did was probably the finest that has been done, as he spared no pains either to himself or the glass-painter during the execution of it. Those who know his windows at Waltham Abbey, or in the chapel of Worcester College, can bear out these remarks. Much of his time and skill was, however, spent upon small articles such as pastoral staves, cups, cabinets and the like.

He was chosen, and rightly chosen, as the best known colourist to design decorations for St. Paul's Cathedral, but the committee had not the courage to carry out his proposals when they got them, and to his great disappointment nothing was done.

William Burges was a strongly-marked personality. He was beloved by many attached friends, and probably no one came into contact with him without being interested and attracted by his strange mixture of fun and earnest, of eccentricity and genius, of work and play. He worked hard and well, but he had an innate cheerfulness that seemed never to flag, and he took and liked to show an interest in many matters which others would consider comparatively trivial. The decoration of his own rooms and furniture, and the collecting and resetting of crystals, gems, cameos, and other such curiosities, as well as armour and other antiquities, was an occupation to which he gave up much time, and in which he seemed to take the most lively interest. As a companion he was bright, cheerful, full of life; but were a matter of art or archæology started, he would pass, without a pause, from playful fun to the soundest criticism, the most enthusiastic admiration of what is excellent, the most learned, and withal, most accurate statement of the archæology of the subject. Burges was below middle height and rather sturdy in figure; he had a bright eye, a frank manner, and a hearty laugh; but no one who looked attentively at him could fail to notice the massive, well-shaped head, and the broad, powerful brow which indicated surely enough that intellectual power of which, though strangers often were not at first led to suspect it, none of his friends were unaware.

I have spoken of Burges's friends; they were numerous and they were with reason attached. He was a man who could do the kindest acts, and would do them in the most unobtrusive fashion; and the cordial remembrance in which his genial cheerfulness is still held is still mixed with deeper feelings of regret for his loss.

Burges's work was vigorous and massive, and when it erred it was rather on the side of excess of strength and heaviness. His favourite style was twelfth-century Gothic. The best known, and perhaps the best, specimen of his powers of design is the set of plans which he submitted for the Law Courts. The Strand front



of that project exercised a remarkable influence upon the works of contemporary architects, and copies of it, or at least suggestions inspired by it, were frequently to be seen after it had been published.

His decorative work at Cardiff Castle and elsewhere can, of course, be only judged by those who have had an opportunity of seeing it; but his design for St. Paul's, which was exhibited at the Royal Academy, first unfortunately in the form of a decorated model only, and a year later in a splendid set of views, may be known to many, and showed great power and resource and vigorous handling. Burges had only just been elected an Associate of the Royal Academy at the time of his comparatively early and very unexpected decease.

In leaving this little group of personal sketches we ought, I think, to carry away a strong sense of respect for the memory of these men. No one can so well judge as the members of an architectural society like this of the amount of studious preparation for active life, and the constant, unwearied, and strenuous exertion of all a man's powers and gifts, natural or acquired, which was involved in the case of each individual who has been named, in order to enable him to reach the position he attained and worthily to discharge his duties.

Such examples are a stimulus and an encouragement to ourselves in our own work; and a glimpse at a group of them, thrown together even in this fragmentary, imperfect manner, will, I hope, send us all home proud of the profession to which we belong, and of the many distinguished men who have maintained and extended its honour.

### THE MANCHESTER SHIP CANAL.

THE Manchester Ship Canal Bill came before a Select Committee of the House of Lords on Tuesday, the Duke of Richmond and Gordon presiding. The Bill seeks for powers to authorise the construction of a canal suitable for the accommodation of vessels of the greatest tonnage, and by means of which such vessels will be able to reach Manchester. The channel of the Mersey from Garston to Runcorn is to be rendered navigable, and will form the means of access to the canal. At Runcorn the canal will begin, and it is to be carried a distance of  $21\frac{1}{2}$  miles to Manchester. The low-water channel is to have a minimum depth of 12 feet, and a maximum depth at spring tides of 40 feet; while the depth of the canal is to be 26 feet, or within a few inches of that of the Suez Canal. The estimated cost of the canal works, making the usual allowance of 10 per cent. for contingencies, is 3,920,171*l.*; for the works in the estuary of the River Mersey, 1,390,419*l.*; for the docks at Manchester and Warrington, 1,121,262*l.*; for deviation of railways, 456,172*l.*; and for new roads, 16,162*l.*; total, 6,904,186*l.* The capital of the company is to be 8,000,000*l.*, and power is taken to borrow on mortgage a further sum of 2,000,000*l.* It is provided under the Bill that if at any future time it should be proposed to vest the undertaking in some public body the company shall not meet such a scheme with opposition. The scheme was introduced into Parliament last year, and, after having narrowly escaped shipwreck on Standing Orders, it was passed by a Select Committee of the House of Commons, but after full discussion before a Committee of the Upper House it was rejected by them in the month of August last. The present Bill differs but immaterially from the project originally presented to Parliament last year; but it contains powers with regard to the low-water channel, of which the 1883 scheme was divested by the Standing Orders Committee. There are 26 petitions against the Bill, but of these appearances have only entered in respect of eight, including the London and North-Western Railway Company, the Corporations of Liverpool and Birkenhead, the Mersey and Irwell Navigation Commissioners, and the Mersey Docks and Harbour Board.

### PICTURE DEALING.

AT the Lambeth County Court, on Tuesday, Mr. J. Pitt Taylor, the Judge, heard a case in which Mr. H. G. Roberts, a dealer in works of art, sued Messrs. Storer & Co., auctioneers, to recover 12*l.* damages sustained by him through non-delivery of a picture. The plaintiff stated that on the 4th ult. he attended a sale at the defendants' and purchased a picture for 25*s.*, paying 5*s.* deposit. Prior to the sale, he carefully examined the work, and found it to be an oil painting by Sartorius, at least seventy years old, and worth 15*l.* or 20*l.* On the morning after the sale he went to the defendants' warehouse for the picture, and was told that he could not have it, as some one had already obtained it by using his name and paying the balance of the purchase money. He then began these proceedings. James Knowles, a picture dealer, stated that the plaintiff bought the picture in a "knock out," and the full value was bid for it. It was not one of Sartorius's, and ought not to be mentioned in the same breath. The landscape was certainly very good, but the dogs were badly done, and one horse appeared more like a child's rocking-horse than a noble animal on

the field. The execution of the figures was hard and crude. The Judge.—If the picture was only worth what was bid for it, what reason was there for a "knock out?" The witness.—I wanted to share in one. We all have to live, you know, and the picture might have been made to sell for more. The Judge.—What, with the bad dogs and the rocking-horse? The witness.—Well, the horses could have been softened down by a good painter and the dogs touched up. It could be put in a new frame. I draw the line at putting a good name on it. In fact, I could not do that; it requires a particular touch with the brush. The Judge.—Are names put on by you picture dealers? The witness.—I am sorry to say they are. The Judge.—You draw the line at forgery? The witness.—Yes. The Judge said the defendants had been negligent. He could not doubt that the plaintiff had got a bargain, and the very lowest sum he could award him was 4*l.* and the costs of solicitor and witnesses.

### POISONOUS PIGMENTS.

A LECTURE was delivered on Monday before the members of the Leeds Architectural Association by Mr. J. C. Wright, surgeon, on "Some of the Evils arising from Household Decoration." Mr. J. W. Connon, F.R.I.B.A., presided. The lecturer said that the necessity for an intimate relationship between doctors and architects became daily more pressing. The law might help both by imposing certain restrictions which at present were conspicuous by their absence. Speaking of the evils arising from some forms of household decoration, he dealt principally with the subject of the contamination of mural decorations with poisonous pigments. He showed that wall papers, wall washes, and distempers, might be so impregnated with arsenic as to cause serious illness, and even death. Colour was no guide, and arsenic was used in colours for which it was not required. He exhibited specimens of wall-papers on which beautiful colours with good body, permanency, and brilliancy might be produced equally well without arsenic. If the colour produced was free from arsenic, there were still further dangers to guard against. In the printing of papers the colour was mixed with size which contained to a certain extent fatty matters, which would decompose. He mentioned that the proportion of arsenic in some papers might be very large, even as much as forty or fifty grains to the square foot, thus indicating the serious results which might ensue. He pointed out the effects of arsenical colours upon the constitution, and said that not only had illness but death ensued from them. The lecturer also referred to the evil resulting from a kind of green wash which was put upon the wall. A wash of this kind had proved fatal to one of his patients only a few years ago. Bed curtains, and more especially green muslin curtains, had been found to be contaminated, and calicoes, carpets, and dresses had been known to be loaded with arsenic. He complained of the want of restrictions in the sale of arsenic, mentioning that the Sale of Poisons Act only bore upon arsenic as solid arsenic, and not upon arsenic in colours. He urged that some legislation should be adopted in regard to the indiscriminate sale of arsenic.

### THE EIGHT FEET BASIS IN SCHOOLS.

A DEPUTATION lately waited on Mr. Mundella in order to advocate the necessity of retrenchment in the expenditure of the School Boards. One of the suggestions was that the Education Department should be satisfied with an area of eight square feet for each child in Board Schools. Mr. Mundella in reply, said that the voluntary schools would not allow their buildings to be filled up to the eight square feet basis. Was not the suggestion impracticable, ruinous to health, and likely, if carried into effect, to break down the whole system by ruining the health of both scholars and teachers? In all the best voluntary schools of the present time they would not have less than ten square feet, and he was convinced that the eight square feet basis would be ruinous alike to health and education, and it would be utterly impossible to enforce the eight feet basis on the London School Board. The eight square feet basis had been made the *minimum*, and if any Board went the least below it, the grant would be at once refused. What the deputation wanted now was for the Education Department to make the *minimum* the *maximum*, and force children into school upon an eight square feet basis. Returning to the question of the eight square feet basis, Mr. Mundella said ever since he had been in the department the officials had urged him to declare that the ten square feet should be the *minimum* instead of eight. He had refused, because he knew there were many poor districts in the country where such an alteration would oblige school managers to provide fresh accommodation. He had not refused because he was not satisfied that it was not the right thing to do, but he felt that it was better to let the eight square feet schools die out. He should certainly never give his sanction to any more schools being built upon that basis.





### Another Competition "Sell."

SIR,—The Guardians of the Knighton Union in Radnor have had a competition for rebuilding the workhouse, and have certainly settled the matter without loss of time, as will be seen from the following facts, which can be vouched for.

The plans were to be in by February 21, on which day the Building Committee met to consider them, and after three or four hours discussion adjourned until February 28, giving orders that *no one was to see the plans until the next meeting.*

On February 28 the Committee and whole Board met, when the Committee voted on the plans, giving a decided majority to the plans marked "A," and the question was then put to the whole Board, who ignored the Committee's preference and gave the work to a local competitor, whose plans, marked "B," were inferior to several others, and which are unlikely to pass the Local Government architect.

This ought to be a lesson to architects, for the selection was made by the Committee out of nine sets of plans after about *six hours discussion* at their two meetings, and their opinion was again upset by the whole Board (many of whom had never looked at the plans) *on the same day.*—I am, &c.

A COMPETITOR.

### Competitions Memorial.

SIR,—Will you allow us through your paper to inform the profession that, as far as names and addresses of architects practising in the United Kingdom can be obtained from the latest sources, the circular and form enclosed (and which, we trust, you will find space to print in its entirety) have been sent. It is impossible to obtain a complete list of architects in practice, but if any gentlemen should not receive a copy in the course of a few days, and will apply to us, we shall be most happy to forward one, and any further copies required.

We are, sir, yours obediently,

COLE A. ADAMS,  
ASTON WEBB,

Hon. Secs. of the Comp. Mem. Com.

[ 14 Holden Terrace, Grosvenor Gardens :  
March 15, 1884.

(Circular Enclosed.)

Dear Sir,—We have to inform you that the competitions memorial committee, appointed by the council of the Royal Institute of British Architects, to carry out the objects of the memorial presented to the President and Council of the Institute on May 24, 1880, by the late Mr. Street, on the subject of public architectural competitions (a copy of which, with the list of those who signed it, is herewith enclosed) are now making an appeal to all the members of the profession asking them to give in formally their adhesion to the principle, namely:—That they will not take part in any public architectural competitions unless one or more professional assessors of established reputation are appointed to advise the promoters on the relative merits of the designs submitted in the competition. The large number who signed that memorial, proves, we think, how very generally the principle contained in it was accepted.

We are, therefore, to ask you, *should you see no objection,\** to kindly fill up the form attached to this circular, and return it to us at your earliest convenience.

By signing the form you do not thereby express any opinion upon the desirability or otherwise of the competition system, but simply that, if it is to exist, it should be upon the principle maintained by the memorial; and whether you are in the habit of competing or not, by signing this form you will do much to insure fairness to those who do compete, as the larger the list is the greater will its influence be upon the promoters of any intended competition, and the greater will be the benefits to the public and the profession at large, as some guarantee will be gained against inappropriate buildings being erected, wasteful expenditure incurred, and undue influence exercised.

By adding your name to the list you incur no legal or pecuniary liabilities, the obligation being purely a moral one, nor are you thereby prevented taking part in any private or invited limited competition, where no assessor is appointed; and should you at any time wish to withdraw your name from this undertaking, it will only be necessary to give three months' notice in writing to that effect to the honorary secretaries for the time being of the competitions memorial committee.

It will be the duty of the committee, on receiving notice of any intended competition, to send a copy of the undertaking and a list of those supporting it to the promoters; and if you will allow your name to be added to this list, you will further the objects of the committee by acquainting the honorary secretaries with the earliest intimation of any intended competition for the above purpose, and we shall be happy at any time to avail ourselves of your assistance in this matter, and to forward you copies of these communications, &c., upon application.

We venture to hope you will recognise the justice of the point contended for, as, if the competition system is adopted for the purpose of procuring designs for buildings, it is only fair and just to the competitors

\* In the circulars sent to memorialists (some 1,400) in place of the words printed in italics are the words, "as one who signed that memorial."

that the merits of their work should be advised upon by those best competent to do so—men placed in a responsible position, and above the influences which, with every desire to act fairly, too often beset a committee composed of laymen, who cannot besides be expected to possess the requisite skill to decide upon the rival merits of designs and their probable cost. Experience shows that committees left to themselves are too likely to be taken by showy drawings and fallacious estimates, and that designs are very frequently chosen which involve all parties concerned in trouble, whereby scandals arise and the reputation of the profession is injured.

The appointment of a professional assessor or assessors for public architectural competitions may not be the cure for all the evils which attend upon the competition system, but it is surely likely to bring about a more satisfactory result, and to induce greater confidence in the public and the profession.

In any case, a reply at your earliest convenience is particularly requested.

We are, dear sir, yours faithfully,

COLE A. ADAMS, }  
ASTON WEBB, } Honorary Secretaries.

14 Holden Terrace, Grosvenor Gardens :  
March 15, 1884.

### LEGAL.

#### Court of Session, Edinburgh.—March 6.

WM. CAMPBELL MUIR v. B. P. STOCKMAN.  
ELECTRIC LIGHTING.

The defendant is proprietor of the estate of Inistrypich, Argyllshire, and he was sued by the plaintiff, a civil engineer 3 Poets' Corner, London, for 319*l.* 15*s.* The plaintiff undertook by contract in writing to fit up the defendant's house in Argyllshire with an instalment necessary for lighting the house with electric incandescent lamps. After the work had been completed the lamps were used; but after a short trial the lighting apparatus broke down, and the defendant refused payment of the account on two grounds—(1) because the contract was unsufficiently or unskilfully executed, and (2) because the account rendered is not in conformity with the contract.

The Lord Ordinary, after evidence, decided against the defendant, and found the plaintiff entitled to expenses. His Lordship said the plaintiff was not responsible for the result of the work complained of—(1) because the dynamo machine sent by Messrs. Siemens turned out of a lower speed than the pursuer anticipated; (2) because the plaintiff was willing that new gearing should have been ordered, and His Lordship thought this should have been done, leaving it a question who should pay for it; and (3) because he thought Mr. Muir undertook the risk of driving the machine under the disadvantageous conditions pointed out. His Lordship was of opinion that the alleged defects of the lamps was in no considerable extent attributable to defects, but was caused by irregularity in the current of electricity, and if his view was well founded, the plaintiff was not responsible for the irregularity of the steam power, because he suggested a method of correcting that irregularity, and his suggestion was not adopted. In regard to the objection to the account, His Lordship held that the work being proved to be such as the defendant contemplated, and the price being according to contract, it did not signify in what form the account was rendered. The defendant appealed against this decision, but their Lordships affirmed the judgment of the Lord Ordinary, with additional expenses.

#### Towcester County Court, Monday, March 3.

(Before Mr. W. H. COOKE, Q.C., Judge.)

HEATH v. REV. R. C. COLLINS.

This action was brought to recover 2*l.* 9*s.* 4*d.*, 4*s.* for attendance on defendant's agent, at various times, and at the office of the Lands Improvement Commissioners, and 25*l.* paid for a surveyor employed. Plaintiff stated that he was a builder. In June, 1882, he received instructions from Mr. Greville, Mr. Collins's solicitor, to prepare plans and specifications, and sent in an estimate for certain work to be done at the defendant's farm in Essex, near Bishop Stortford. He told Mr. Greville, as it was a large job, and the plans had to be submitted to the Lands Improvement Commissioners, he should have to employ a surveyor, and he did engage Mr. Mumby, of Salter's Hall Court, London. He sent in the plans and specifications (for which he paid 25*l.*) to Mr. Greville, and witness believed advertisements were inserted in the Bishop Stortford papers for tenders; but he heard nothing whatever of the matter from that time. His estimate was eleven hundred odd pounds for the work to be done. The surveyor's charge was fair—though there was a good deal of controversy between the solicitors as to the admission of this statement from the plaintiff—being based on the custom of 5 per cent. for works executed, and 2½ per cent. for unexecuted plans. Witness's own charge of 4*l.* 4*s.* was money out of pocket.—Cross-examined: He did not do the necessary work at Bishop Stortford when he was down there doing some work for Mr. Collins, and for which he had been paid; he went to see the tenant of the farm on



two or three other occasions. He admitted that Mr. Greville sent him a plan of the premises, accompanied by a letter making certain statements as to the work required to be done. Mr. Greville told him that the estimate was too high, and that a friend whom he consulted thought the proposed buildings could be put up for 200*l.* less, and that if he would send in a modified estimate it would be considered, and the plaintiff given a preference. He would swear that he spoke about employing an architect before the plans were sent in; he told Mr. Greville that he should have to pay a professional man, and, when in London, told him he was going to the architect. He admitted receiving a letter in which it was stated that three of the tenders for the buildings were under 900*l.*, and Mr. Percival said the bearing of this on the case was that, if the Court held the defendant was liable, the 20*l.* paid into Court was a reasonable payment on 2½ per cent. for the plaintiff's services.

His Honour: Now the question is, I understand, only as to whether the plaintiff is entitled to anything more than 2½ per cent. for his unaccepted plans.

Plaintiff's manager said he was at Mr. Greville's office when the defendant's agent gave Mr. Heath instructions about the work in Essex. If the plaintiff did the work he was not to be paid for the plans; on the other hand, if his estimate was not accepted, he was to be remunerated.

The case for the defendant was that Mr. Greville never instructed Mr. Heath to employ an architect, and that the 20*l.* paid into Court was ample for the work done, and all travelling expenses connected with it.—Mr. Greville stated that he acted as solicitor and agent to Mr. Collins, who held the farm in question. He denied that he authorised the engagement of a surveyor, and not until August 14, 1882, in a letter of that date, did he know that a professional gentleman was employed. Only once did he meet defendant by appointment in London with reference to the matter. The plans worked from were really not Mr. Heath's; but, having consulted Mr. Law, of Northampton, he had advised his client to pay into Court 20*l.*, a sum which, however, witness thought exorbitant. Cross-examined: He paid the builder who ultimately did the work 823*l.* as the amount of his account.—Mr. Henry Law said he was a Fellow of the Royal Institute of British Architects; had been in practice for twenty years, in partnership with his late father, and was surveyor for the county. Having looked at the plans produced, he thought 20*l.* was a proper payment for a complete tracing, but those produced were rough, and made in such a manner as he would not allow his office boy to do them. The charge would include all expenses in making the plans.

The Judge said, after hearing the evidence of Mr. Law, he was convinced that the money paid into Court was sufficient. Judgment for the defendant with costs.

## WORKS IN PROGRESS.

**Mr. E. H. Shorland**, of Manchester, has just completed the warming and ventilating throughout of the New Union Hospital, Mansfield, by means of his Manchester grates and vertical ventilating tubes, Mr. R. F. Vallance, of Mansfield, being the architect.

**The Sanitary Paint Co.**, of 51 South Castle Street, Liverpool, have been awarded the gold medal of the Calcutta Exhibition for their "Griffiths patent white, enamel, and other paints, colours, varnishes, &c." These various productions will be exhibited from March 24 to April 5 at the Building Exhibition, Agricultural Hall, London.

**Messrs. Suffling & Co.**, 143 Edgware Road, have just commenced the memorial window to the memory of the late Lord Castletown. It is of the Decorated style of architecture, and is in four openings, containing respectively figures almost life-size of *St. Peter, Our Saviour, St. Paul*, and *St. James*, surmounted by lofty canopies. The whole when finished will form the east window of Grafton Church, Northamptonshire. The colouring, while being in the draperies, &c., very rich, is still subdued, and forms a deeply coloured picture in a white and golden setting.

**Messrs. Diespeker & Co.**, 40 Holborn Viaduct, have lately completed the mosaic flooring in the following buildings:—Delph Reform Club, Mr. Alexander Banks, architect, Oldham; London and Provincial Bank, Kingsland, Mr. A. B. Hutchings, architect; Whittington House, Whittington Avenue, E.C., Messrs. Edward and E. B. Ellis, architects; St. Dionis Chambers, Lime Street, E.C., Messrs. Huntley and Palmer's, Fenchurch street, E.C., Mr. H. H. Collins, F.R.I.B.A., architect; Imperial Hotel, Exmouth, Mr. W. A. Coombs, architect; Norland House, Clifton, Mr. H. Hirst, architect; Hafodunos, Abergele, North Wales, Mr. John Oldred Scott, architect.

**The New Empire Theatre.**—Messrs. Vaughan & Brown, gas engineers, 16 and 17 Kirby Street, Hatton Garden, 19 Farringdon Road, and Saffron Hill, London, E.C., are executing the whole of the gas arrangements at the new theatre in Leicester Square. The massive chandeliers for the vestibule and side entrances, large

double brackets for the walls of the private boxes, balcony, corridors, foyer and staircases, are all made to correspond with the architecture of the building. The whole of the fittings are made so that they can be used either for gas or electricity when required. The stage is entirely fitted with their patent flash-light system, which enables the gas-man at the index plate to light or extinguish the whole of the gas-lighting on the stage instantaneously. The footlights are embedded in a white enamelled wrought-iron trough, which gives a beautiful reflection on the stage; this we may add has been fitted with their new patent burners. They are also fitting to the stage their improved registered water joints. The capacity of the meters they have fixed in the front of the house are equal to 1,000 burners, while those at the back of the house are equal to 2,000 burners.

## GENERAL.

**Mr. L. Alma Tadema, R.A.**, was, at the annual meeting on Saturday last, elected President of the Royal Birmingham Society of Artists, and Mr. J. A. Chatwin, architect, Vice-President.

**A Memorial of Bishop Hooker** is proposed for Bishopsbourne Church, near Canterbury, in which he is buried. The memorial is to take the form of a stained glass window.

**A Natural History Museum** is proposed for the town of Hamburg, the cost of the building to be about 45,000*l.* Prizes of 50*l.* are offered for the five best plans, and a further prize of 200*l.* will be assigned to the best of the five.

**"Quatre Bras,"** by Mrs. Butler, which belonged to Mr. C. J. Galloway, of Manchester, has been purchased for the Melbourne Museum.

**A Profit of £30,232** is reported on the gas undertaking of the Corporation of Leicester for the past year, which will be applied to the reduction of the borough rates.

**Mr. A. Wetherell** has presented a collection of antiquities to the library of Canterbury Cathedral. Among the jewellery are a crown studded with numerous white topaz and blue beryl, which came from the castle of the Comte la Doucet de Marc, having been saved from destruction at the Revolution of 1792 by the English governess; a jewel found upon the field of Agincourt, and a splendid imitation of the Koh-i-Noor, cut in the finest Spanish crystal, and said to be quite equal in beauty to the original. There is also a collection of coins, containing many rare specimens.

**The Prince of Wales** will lay the foundation stone of the new tower of Peterborough Cathedral in the first week of May.

**The Hanging Committee** for the next exhibition of the Royal Academy will consist of Mr. George Richmond, Mr. J. C. Horsley, Mr. Thomas Faed, and Mr. Peter Graham.

**The Manchester Consistory Court** have authorised the restoration of the venerable parish church of Deane, under the direction of Mr. R. K. Freeman, of Bolton.

**Plans for a Board-room** adjoining the Lodge at Lledarrhu Cemetery have been prepared by Mr. T. R. Phillips, architect, of Pontypridd, and are to be carried out forthwith.

**The Salford Corporation** have secured the picture of *John Hampden's Burial*, by Mr. P. H. Calderon, R.A., for the Langworthy Art Gallery, Peel Park, at a cost of 210 guineas. Some years ago the picture was purchased from the artist by Mr. Agnew for 800 guineas.

**A Marine Promenade** and other improvements to constitute New Romney a watering-place is under consideration, and a preliminary expenditure of 100,000*l.* is proposed.

**The Calcutta Exhibition** was closed on last Monday. Since the opening on December 5 the paying visitors have numbered 817,000.

**A Tapestry Panel** in the style of an old arras tapestry, which was executed at Windsor Works by English apprentices, has been purchased by the Queen. The subject is a view of Balmoral Castle.

**The Equestrian Statues** for Blackfriars Bridge are to be modelled by Mr. J. E. Boehm, R.A., Mr. T. Brock, A.R.A., Mr. Onslow Ford, and M. Longterre, an assistant of Mr. Boehm.

**Messrs. John Warner & Sons** have obtained three gold and ten silver medals for their exhibits at the Calcutta Exhibition; a silver medal was likewise awarded to Mr. R. Warner for his work on orchids.

**Messrs. Archibald, Smith & Stevens** supplied the powerful hydraulic lift, referred to in the description of the Edinburgh Conservative Club. It is one of Stevens and Major's patent low pressure multiplying lifts, receiving the water direct from the mains.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MARCH 15, 1884.

### COMPETITIONS OPEN.

**DARLINGTON.**—The School Board invite Plans, Sections, and Elevations for Schools about to be built in Beaumont Street. Mr. F. T. Stevenson, Clerk to School Board, Northgate, Darlington.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**NEWCASTLE-ON-TYNE.**—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

**WIDNES.**—March 20.—Designs are invited for Public Offices and Town Hall. Mr. J. T. Allen, Public Offices, Widnes.

### CONTRACTS OPEN.

**ANSDELL.**—March 20.—For Building Two Pair of Villas. Mr. T. P. Worthington, Architect, South Shore, Blackpool.

**BALLYMONEY.**—March 31.—For Building a Church. Messrs. Young & Mackenzie, Architects, Belfast.

**BARNLEY.**—March 22.—For Building Stable, Coach-house, &c. Mr. H. Crawshaw, Architect, 1 Pitt Street, Barnley.

**BILSTON.**—March 17.—For Construction of Sewerage Works. The Surveyor, Town Hall, Bilston.

**BLACKBURN.**—March 25.—For Building Seven Shops, Salford Bridge. Messrs. Myers, Veevers and Myers, Architects, 15 Chapel Street, Preston.

**BLYTH.**—March 15.—For Erection of a Church. Mr. W. S. Hicks, 19 Mosley Street, Newcastle-on-Tyne.

**BLYTH.**—March 19.—For Painting Station Buildings on Blyth and Tyne Section. Mr. Harrison, Engineer, Central Station, Newcastle-on-Tyne.

**BURY.**—April 7.—For Removal of Heap Bridge over the River Roch, and Erection of Stone Bridge in lieu. Mr. W. Radford, Bridgemaster, 1 Princess Street, Manchester.

**BOSTON SPA.**—For Building House and Shop. Mr. H. May, Architect, East Parade, Leeds.

**EDINBURGH.**—March 19.—For proposed Works for Forestry Exhibition. Mr. Morham, Town Surveyor, 11 Royal Exchange, Edinburgh.

**EDINBURGH.**—March 24.—For Construction of Brick Gasholder Tank at Blandfield. The Engineer to the Gas Company, 11 Baltic Street, Leith.

**GOSPORT.**—March 31.—For Additions to Police Station. Mr. J. Robinson, County Architect, County Hall, Winchester.

**GREENOCK.**—March 19.—For Mason and Joiner Work of Section No. 3 of Municipal Buildings. Mr. C. Macculloch, Town Clerk, Greenock.

**HARPENDEN.**—For Building Pair of Villas. Mr. J. R. Brown, Architect, King Street, Luton.

**HARROGATE.**—For Building Bank and Business Premises. Messrs. H. E. & A. Bown, Architects, James Street, Harrogate.

**HOLYWELL GREEN.**—March 31.—For Building Fireproof Mill, &c., Warehouse, Engine-houses, and Chimney. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**HORTON.**—For Erection of Farm Buildings. Mr. John Tudor, Great Marlow.

**LKESTON.**—March 27.—For Building Board Schools. Mr. Tait, Architect, 28 Friar Lane, Leicester.

**KENILWORTH.**—March 19.—For Cast-iron Socket Pipes and Special Castings for the Water Supply. Mr. E. Pritchard, C.E., 37 Waterloo Street, Birmingham.

**LEYBURN.**—March 31.—For Building Wesleyan Chapel and School. Mr. C. Anderson, Architect, 12 Lendal, York.

**MIDLAND RAILWAY.**—March 20.—For Supply and Delivery, at Keighley Station, of Two Wrought-iron Girders, with Corrugated Iron Floor (48 tons); for Supply and Delivery, at Leeds or Bradford Stations, of Wrought-iron Work for the Reconstruction of Three Occupation Bridges (23 tons); and for Supply and Erection of Cast-iron Work for Reconstruction of Road Bridge over River Witham, Lincoln (31 tons). Plans and Specifications at the Engineer's Office, Derby.

**MIRFIELD.**—March 26.—For Building Warehouse, Willey Rooms, Tenter Stoves, &c. Messrs. Kirk & Sons, Architects, Dewsbury.

**NEWCASTLE-ON-TYNE.**—March 19.—For Fittings and Furniture of Public Library. Mr. John Johnstone, Architect, 6 Clayton Street West, Newcastle-on-Tyne.

**NEWTON-IN-MACKERRFIELD.**—March 17.—For Building Cemetery Chapel, Lodge, Mortuary, &c. Mr. Richard Brierley, C.E., Town Hall, Newton-le-Willows.

**RHYMNEY.**—March 24.—For Construction of Bridge, Chapel, Boundary Walls, &c., for Cemetery. Mr. Lloyd Marks, Surveyor, 59 High Street, Rhymney.

**SELBY.**—March 21.—For Building School and Class-rooms to Methodist Chapel. Rev. J. Phillipson, Selby.

**SWINDON.**—March 24.—For Building Infants' School, Boundary Walls, &c. Mr. W. Drew, Architect, 39 Victoria Street North, Swindon.

**THROWLEIGH.**—For Restoration of Church. The Churchwarden, Throwleigh, Okehampton.

**UTTOXETER.**—For Construction of Filter Beds. Mr. D. Dunnett, Solicitor, Uttoxeter.

**WEST BROMWICH.**—For Painting Refreshment Room, Band Stand, and other Buildings in Park. Messrs. Wood & Kendrick, Architects, West Bromwich.

**WETHERAL.**—March 30.—For Building Detached House. Mr. James Murchie, Architect, Lowther Street, Carlisle.

### TENDERS.

#### ASTON.

For Road Works, Aston, Mr. J. W. Brown, Surveyor.	
Heap, Birmingham	£1,285 0 0
Currall & Martin, Birmingham	1,262 0 0
Jones & Fitzmaurice, Birmingham	1,229 0 0
Law, Sutton Coldfield	1,226 10 0
Biggs, Birmingham	1,140 0 0
Palmer, Birmingham (accepted)	1,119 5 0

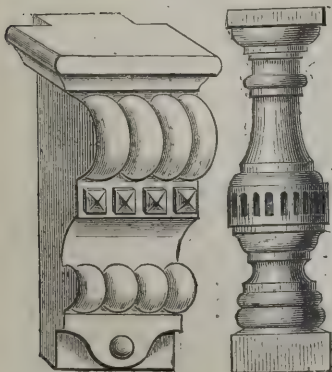
#### AUDENSHAW.

For Sewering and Draining Guide Lane and Shepley Road, in three contracts. Mr. J. H. Burton, Surveyor, Warrington Street, Ashton-under-Lyne.	
Davison, South Ossett	£1,699 0 0
Slinger, Cleckheaton	1,080 10 0
Jefferies, Manchester	1,071 1 0
Taylor & Duckworth, Denton	1,070 18 5
Worthington, Manchester	1,035 11 0
Nutton, Eiland	1,013 3 0
Bennison, Hyde	997 15 8
Kellet & Co., Leicester	977 6 8
Clarke, Manchester	951 0 0
Freeman, Hollinwood	945 15 0
Hayes, Bolton	889 18 3
Slater & Son, West Leigh	883 2 0
Burton & Sons, Ashton-under-Lyne	863 0 0
Heaton, Hooley Hill	838 19 8
Turner & Son, Heywood	837 16 7
PENDLEBURY, Manchester (accepted)	793 8 7
Surveyor's estimate	974 16 4

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a **Semi-Vitreous** nature, will maintain a clean and washable surface.

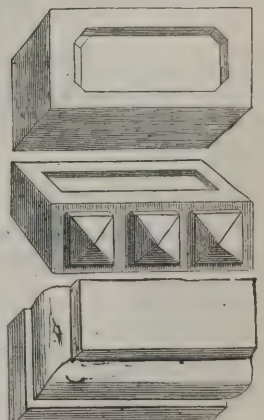
## FACING BRICKS AND BRICK ORNAMENT OF TRUE TERRA-COTTA, AS ALSO ARCHITECTURAL WORK, IN WHITE AND WARM-TINTED BUFF.



Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—**CANDY & CO., Limited**, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitriified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitriified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





**BANSTEAD.**

For the Erection of Three Additional Houses at the School, Banstead, Surrey, for the Managers of the Kensington and Chelsea School District. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C. Quantities supplied.

Lee & Son	£5,192	6	0
Munday	4,903	16	6
Burman & Son	4,697	0	0
Knight	4,894	11	6
White	4,414	9	0
Potter	4,316	16	0
Deacon	4,257	0	0
Hobbs	4,170	0	0
Masters	4,136	0	0
Howell	4,105	0	0
Hizes	4,099	0	6
LONGLEY, Crawley (accepted)	3,998	0	0

**BEDFORD.**

For Building Six Houses on the Beckett Estate, Bedford. Mr. HENRY YOUNG, Architect.

George	£2,207	0	0
Willmott	2,065	0	0
Harrison	1,968	0	0
Green & Son	1,946	0	0
Dunham	1,920	0	0
Freshwater	1,899	13	0
Dennis	1,832	0	0
Smith	1,761	16	0
Laughton	1,760	0	0

**BELFAST.**

For Building Public Library, Reading Rooms, &c., Royal Avenue, Belfast. Mr. W. H. LYNN, Architect, 21 Calender Street, Belfast.

Cullen Bros., Portadown	£20,764	4	9
Lawrie, Belfast	18,200	0	0
Corry, Belfast	17,765	5	0
Fitzpatrick Bros., Belfast	17,185	4	0
Henry, Belfast	17,152	5	5
Silo & Matthews, Belfast	17,125	0	0
McLoughlin & Harvey, Belfast	16,532	11	9
Fulton, Belfast	16,330	0	0
Dixon & Co., Belfast	15,950	0	0
H. & J. MARTIN, Belfast (accepted)	15,532	0	0

**BINGLEY.**

For Works in Morningside Road, Bingley. Mr. M. R. ARMISTEAD, Surveyor.

Tempest, Keighley	£448	8	0
Brigg, Bingley	440	13	0
Tennant, Windhill	436	16	0
Browne, Manchester	425	7	0
Wood, Bingley	413	0	0
FOULDS BROS., Bingley (accepted)	337	0	0

**BIRMINGHAM.**

For Enlargement of St. George's Church, Edgbaston, Birmingham.

SAPCOTE & SONS (accepted) . . . £6,380 0 0

**BRISTOL.**

For Pennant Stone Flagging, Bristol. Mr. F. ASHMEAD, Surveyor.

Cox	£2,589	6	8
Cryer	2,441	11	3
Tree	2,398	15	5
Yalard	2,375	9	7
GALBRAITH (accepted)	2,271	11	3

**BURTON.**

For Construction of a Single-span Bridge over the Trent (exclusive of masonry) from the Andersley to the Ox Hay Recreation Ground, Burton.

Thornewill & Warham, Burton . . . £767 0 0

Ten tenders were received for the work.

**CALVERLEY.**

For Building Weaving Shed, Calverley. Mr. JOWETT KENDALL, Architect, Idle. Quantities by the Architect.

J. Thornton, Idle, mason	£426	10	0
J. & E. Barker, Calverley, joiner	445	0	0
Hird, Shipley, millwright and ironfounder	322	10	0
Padgett, Idle, plumber and painter	239	10	0
T. & A. Thornton, Eccleshill, slater	115	10	0
Kitson, Idle, plasterer	41	0	0

Total . . . £1,590 0 0

**CARNOUSTIE.**

For Alterations on Carnoustie Church. Messrs. JAMES MACLAREN & SON, Architects, Dundee.

Robertson & Black, Carnoustie, mason.

Watt, Carnoustie, joiner.

Brown, Dundee, plumber.

Anderson & Co., Arbroath, heating.

Total cost—£620.

**CHATHAM.**

For Alterations at the Premises in Chatham of the London and County Banking Company.

Rider, London	£2,888	0	0
Ashby, London	2,587	0	0
Forod & Son, Rochester	2,250	0	0
Cox, Beckenham	2,225	0	0
Bell & Higgs, London	2,194	0	0
Naylor & Son, Rochester	2,187	0	0

**EBBW VALE.**

For Building Hotel and Stables, Ebbw Vale, Mon. Mr. E. A. JOHNSON, Architect, Abergavenny. Quantities by Architect.

Richards, Bristol	£3,375	0	0
D. Davies, Cardiff	3,200	0	0
Morgan, Tredegar	3,150	0	0
Isaac, Sketty	2,999	1	6
Jones & Son, Newport, Mon.	2,897	0	0
Thomas, Abergavenny	2,890	0	0
D. J. Davies, Cardiff	2,850	0	0
FOSTER, Abergavenny (accepted)	2,745	0	0
Inwood, Malvern (withdrawn)	2,620	0	0

**ELTON.**

For Low-pressure Hot-water Heating Apparatus, Mount Pleasant Infant School and Class-rooms, Elton. Messrs. MAXWELL, TUBE & HURST, Architects, Southport.

Downham, Bury	£57	10	0
Kershaw, Heywood	55	0	0
Clegg, Bacup	55	0	0
Schofield, Southport	50	0	0
PETRIE, Rochdale (accepted)	48	0	0

**GRAYS.**

For the Erection of a Dwelling-house in Prospect Row, Grays, for Mr. Thomas Worboys. Mr. E. C. ALLAM, Architect, Romford.

THOMPSON & SON (accepted) . . . £310 12 6

**HADLEY.**

For Sewage Work, Hadley, Salop.

Harries, Shrewsbury	£600	10	0
Lucas, Wellington	553	9	0
R. & J. Millington, Oakengates	524	0	0
DAVIES, Ludlow (accepted)	445	0	0

**IPSWICH.**

For Alterations to Woodlands, Ipswich. Mr. H. M. EYTON, Architect.

Coe	£375	0	0
Graystone	365	0	0
Smith	359	0	0
Gibbons	355	0	0
WAGSTAFF (accepted)	326	0	0

**LIVERPOOL.**

For Warming Fitting-rooms for Messrs. Cripps's Mantle Warehouse, Bold Street, Liverpool.

RENTON GIBBS (accepted).

**LONDON.**

For Gasfitters' Work, Finsbury Park Congregational Church. Messrs. SEARLE & SEARLE, Architects, 4 Bloomsbury Place, W.C.

		Brass Fittings.		Iron and Brass.	
Biggs	—	£201	0	0	0
Vaughan & Brown	£213	8	3	158	0
JONES & WILLIS (accepted)	149	10	6	129	10

For Enlargement of Board School, Gloucester Road. Mr. E. R. ROBSON, Architect.

Holloway	£5,763	0	0
Grover	5,680	0	0
F. & F. J. Wood	5,679	0	0
Marland	5,675	0	0
Perry & Co.	5,605	0	0
Lathey Bros.	5,602	0	0
Downs	5,557	0	0
Wall Bros.	5,543	0	0
Goodman	5,497	0	0
Niblett	5,466	0	0
Howell & Son	5,428	0	0
Patman & Fotheringham	5,400	0	0
Reading	5,390	0	0
Kirk & Randall	5,370	0	0
Hart	5,360	0	0
Pritchard	5,344	0	0
Tongue	5,334	0	0
Atherton & Latta	5,250	0	0
Jerrard	5,243	0	0
Stimpson & Co.	5,160	0	0
Johnson	5,119	0	0

For Enlargement of Board School, Belleville Road. Mr. E. R. ROBSON, Architect.

Tongue	£5,276	0	0
Perry & Co.	5,167	0	0
Kirk & Randall	5,140	0	0
Jerrard	5,134	0	0
Howell & Son	5,110	0	0
Patman & Fotheringham	5,061	0	0
Wall Bros.	5,020	0	0
Hobson	4,951	0	0
Atherton & Latta	4,900	0	0
Lathey Bros.	4,883	0	0
Stimpson & Co.	4,880	0	0
Turtle & Appleton	4,790	0	0
Johnson	4,773	0	0

For Dividing Playgrounds, and Building new W.C.'s, Urinals, Cloakrooms, at Board School, Clifton Road.

Goad	£629	0	0
Atherton & Latta	620	0	0
Roy	597	0	0
Nightingale	590	0	0
Jerrard	433	0	0

For Alterations and Additions to the "Croft," Lytton Grove, Putney Hill, Surrey, for the Hon. Baron C. E. Pollock. Messrs. LEE BROS. & PAINE, Architects, 8 Adelphi Terrace, W.C. Quantities supplied.

Bishop . . . £1,295 0 0

ARRIS (accepted) . . . 1,252 0 0

For Constructing Roads and Sewers upon the Estate of Mr. R. J. Pettward, at Putney, Surrey. Messrs. LEE BROS. & PAINE, Surveyors. Quantities supplied.

Aries	£6,832	0	0
Neal	5,656	0	0
Blackmore	5,485	0	0
AVIS & Co. (accepted)	5,444	0	0

For Completion of Congregational Church, West Kensington. Mr. CURT NICHOLLS, Architect.

Bray & Pope	£7,614	0	0
Nightingale	5,940	0	0
Rider & Son	5,888	0	0
Shurmer	5,760	0	0
Kearly	5,597	0	0
Staines & Son	5,384	0	0
Higgs	5,000	0	0
Richardson	4,910	0	0
Smith	4,867	0	0
Landen & Son	4,790	0	0
D. D. & A. Brown	4,615	0	0
Howell & Son	4,516	0	0

**LONG EATON.**

For Supplying and Setting-up Steam Engine and Pumps at Sewage Farm, Long Eaton.

Reader, Nottingham	£477	0	0
Abel, Derby	445	10	0
Hicks & Co., Bolton	445	0	0
Hughes, Nottingham	435	0	0
* Hughes, Nottingham	377	0	0

\* Alternative Tender, based on the contractor's own specification. It has been decided to accept one or other of Mr. Hughes' offers for the work.

**LONGTON.**

For Heating Apparatus, Lloyd's Bank, Longton.

RENTON GIBBS, Liverpool (accepted).

**MANCHESTER.**

For Heating Business Premises, 48 King Street, Manchester.

RENTON GIBBS, Liverpool (accepted).

**NEW FOREST.**

For Erection of Hunting Stabling at Annesley Bank, Lyndhurst, Hants. Mr. FRANK J. BREWSTER, Architect, Richmond, Surrey.

F. & W. PAYNE, exclusive of ironwork and fittings (accepted) . . . £600 0 0

**NOTTINGHAM.**

For Building Residence, Stabling, &c., Nottingham. Mr. GILBERT S. DOUGHERTY, Architect, Nottingham. Quantities by the Architect.

Osborne, Nottingham	£3,047	0	0
Wood & Son, Nottingham	2,955	0	0
Messom, Nottingham	2,937	0	0
Fish & Son, Nottingham	2,851	0	0
Middleton, Nottingham	2,830	0	0
Lynam & Kidd, Nottingham	2,821	15	0
Vickers, Nottingham	2,807	6	0
BELL & SON, Nottingham (accepted)	2,766	10	0
Smith, Arnold	2,754	0	0
Morrison, Nottingham	2,735	0	0
Cuthbert Bros., Nottingham	2,733	0	0
Bott & Wright, Nottingham	2,710	0	0
Scott, Nottingham	2,691	0	0
Wheatley & Maule, Nottingham	2,673	0	0
Cooper, Nottingham	2,595	0	0
Brown & Sons, Newark	2,560	0	0
Ireson, Wade & Gray, Nottingham	2,534	0	0
Huskinson & Jeffreys, Nottingham	2,464	0	0
Price, Nottingham	2,445	0	0

**Heating.**

Perkins & Son, London . . . 95 10 0

Bell & Son . . . Panelled Ceilings, &c. . . 100 0 0

For Taking Down Portion of Boundary Wall to St. Peter's Churchyard, Nottingham, Rebuilding, &c. Mr. BROWN, Borough Engineer.

McCulloch, Balwell	£390	0	0
Prince & Wilkinson, Balwell	325	0	0
Fisher Bros., Mansfield	695	0	0
Sills, Balwell	678	0	0
Beck, Matlock Bridge	672	10	0
Green, Nottingham	620	0	0
Bell & Son, Nottingham	564	6	0
Cooke & Johnson, Nottingham	550	0	0
Hodson & Son, Nottingham	508	0	0
Moore, Nottingham	429	12	7
FOSTER & BARRY, Nottingham (accepted)	425	14	0

**PEVENSEY.**

For Erection of House at Wallsend, Pevensy, Sussex. Mr. FRANK J. BREWER, Architect, Richmond, Surrey.

BARNARD, Pevensy (accepted) . . . £500 0 0

**RICHMOND.**

For Warehouse, &c., Duke Street, Richmond, Surrey, for Mr. W. Cockburn. Mr. FRANK J. BREWER, Architect, Richmond.

Hackett, Islington	£1,560	0	0
Sims, Richmond	1,250	0	0
Carless & Co., Richmond	1,235	0	0
Sweet & Loder, Richmond	1,227	0	0
MATON, Kew (accepted)	1,210	0	0

**SALFORD.**

For Building Day Industrial School, for the Salford School Board.

NEILL & SONS (accepted) . . . £4,564 0 0

**SHEFFIELD.**

For Warming Ebenezer Wesleyan Sunday School, Sheffield.

RENTON GIBBS, Liverpool (accepted).

**SOMERBY.**

For Construction Brick Tanks, Pipe Sewers, &c., Somerby.

Mr. GAMBLE, Borough Surveyor, Grantham.			
Roberts, Oakenshaw	£237	4	8
Greenwood, Mansfield	221	19	2
Beer, Grantham	193	13	10
HOCKLEY, Grantham (accepted)	188	6	11
Engineer's estimate	206	6	10

**Iron Water Mains, Valves, &c.**

Greenwood, Mansfield	275	16	0
Beer, Grantham	237	7	5
Hockley, Grantham	174	15	10
Roberts, Oakenshaw	164	8	10
BANLEY, Grantham (accepted)	151	11	1
Engineer's estimate	141	1	11

**SOUTH ELMSALL.**

For Erection of a Wesleyan Church at South Elmsall, near Doncaster. Mr. JAMES WILSON, Architect, Leeds.

Quantities by the Architect.

**Accepted Tenders.**

Wilson, mason	£704	13	4
Gelder, joiner	320	0	0
Rawlins, slater	82		



**STALHAM.**

For Building Baptist Chapel and School at Stalham. Mr. G. BAKER, Architect, Yarmouth.  
Batchelor, Stalham . . . . . £1,728 0 0  
Wilson, North Walsham . . . . . 1,682 10 0  
EVANS, South Walsham (accepted) . . . . . 1,346 0 0

**STOKESLEY.**

For Rebuilding Skutterskelf Bridge, Stokesley, West Riding of Yorkshire. Mr. WALTER STEAD, West Riding Surveyor, Northallerton.  
Leonard, South Bank . . . . . £600 0 0  
France, Middlesbro' . . . . . 450 0 0  
Bainbridge, Yarm . . . . . 419 0 0  
Cook, Middlesbro' . . . . . 323 0 0  
W. & R. Blackett, Bishop Auckland . . . . . 290 0 0  
Spencer, York . . . . . 280 0 0  
BLACKBURN, Whitby (accepted) . . . . . 275 18 8

**STOURBRIDGE.**

For Laying Cast-iron Pipes for Rising Main from the Pumping Station, at Stourbridge, to Proposed Sewage Farm, Whittington, near Kinver. Mr. W. FIDDIAN, Surveyor, Stourbridge.  
Curraill & Lewis, Birmingham . . . . . £1,283 0 0  
Botterill, London . . . . . 1,240 0 0  
Evans Bros., Wolverhampton . . . . . 1,093 0 0  
Law, Kidderminster . . . . . 873 15 3  
JEVONS, Dudley (accepted) . . . . . 858 7 5  
Hughes, Dudley . . . . . 828 1 5  
Fort, Buckler & Co., Leicester . . . . . 803 6 9  
Hilton & Sons, Birmingham . . . . . 681 0 0

**WARRINGTON.**

For Heating Apparatus for Mr. J. Warburton, Warrington.  
RENTON GIBBS, Liverpool (accepted).

**SPRAGUE & CO.**

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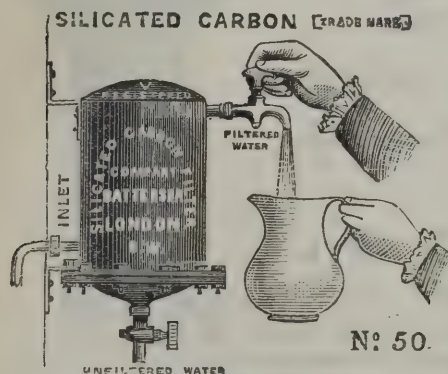
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**THE HOUSEHOLD DISINFECTANT**

Sanitary Institute Medal, Exhibition, 1882.  
Silver Prize Medal, National Health Society, 1883.  
Award, International Medical and Sanitary  
Exhibition, 1881.

Colourless—Non-Poisonous—Gives no Stain.

Disinfecting Fluids, Powders, Soaps, Ointments, Furniture  
Cream, Fumigators, &c., &c.

AS SUPPLIED TO 600 PUBLIC HEALTH  
BODIES.

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**TORQUAY.**

For Completion of St. John's Church Tower, Torquay.  
Mr. A. E. STREET, M.A., Architect. Quantities not  
supplied.  
Albey, Salisbury . . . . . £2,265 0 0  
Trask Norton-sub-Hamden . . . . . 2,207 0 0  
Goss, Torquay . . . . . 1,995 0 0  
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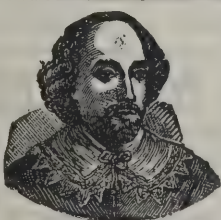
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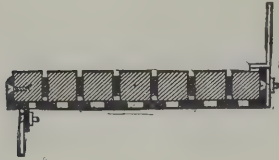
# LINDSAY'S

## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

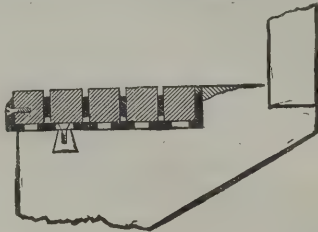
### FOR EVERY DESCRIPTION OF STAIRCASE.

THIS Patent is an improvement on the well-known wooden block construction, and its speciality is that the wooden blocks in each Tread can be removed and transposed so many times that it is almost indestructible besides being noiseless.

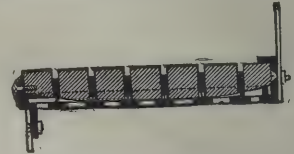
No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.

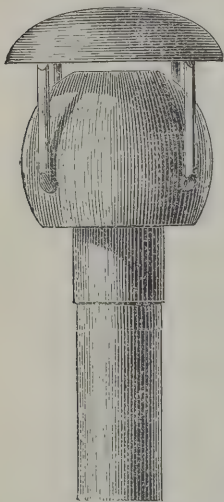


In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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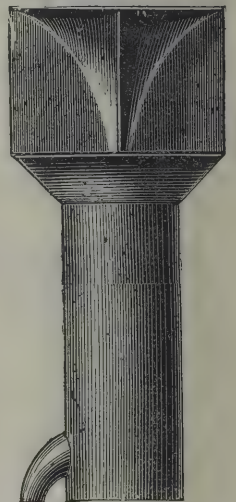
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# The Architect.

## THE ARCHITECTURAL EMPLOYMENT OF IRON.



OME amount of interest was awakened about a year ago by the report brought home from the United States of America by Mr. GALE, concerning the new ways of building construction which had come under his notice during a brief tour in the New World as the holder of the "Godwin Bursary." As the first of what we hope may be a long and creditable line of travelling students, induced by this annual prize to go specially forth into foreign lands in search of ingenious novelties in the practice of building

(which many of us might otherwise too fondly suppose are only to be met with in England), it was doubtless the right thing to do when Mr. GALE went straight to America, as the first quarter in which, even if there were not much for us to imitate on a large scale, there ought at any rate to be a good deal to attract attention in detail.

Mr. GALE brought over a considerable amount of information well worth hearing, and a collection of drawings even better worth seeing; but it cannot be denied that the expectations of those who thought there would not be much in all this to revolutionise English architecture were pretty well borne out. American architects for the present are following those of England and France, certainly not leading them. The whole world knows how active and inventive the Americans are in all kinds of business, and how multitudinous are the products of their activity and invention in the shape of clever contrivances, sometimes perhaps a little too clever, if very seldom not clever enough; but beyond this point, in building if in nothing else, they do not as yet seem to reach. Nevertheless it would probably be a mistake to suppose that American freedom of mind may not here and there be indicating, to those who can read the language, the direction of coming progress.

There is one thing with reference to which we may fairly ask whether or not the Americans are thus advancing, namely, the employment of iron. Say what we will, under the inspiration of tradition, as to the impracticable character of this material for the purposes of building on a grand and permanent scale, there can be no doubt whatever that it is being forced into use throughout the world with all that resolute persistency of trade which customarily insures success; and perhaps we shall meet with no contradiction if we express the opinion that, in spite of Crystal Palaces and St. Pancras Railway Stations, besides what has been done on the Continent, it is in America that such persistency is being most emphatically displayed. One reason may be stated thus:—In Europe the employment of iron in building of the architectural rather than engineering kind is recognised only as a cheap expedient to be kept strictly under control by the dignified demands of more costly construction, but in America the cheapness of the material is the one overpowering consideration which entitles it to be accepted with especial enthusiasm, not out of mere parsimony, but rather for the sake of the greater quantity of good service that can be had out of it for good money. From this point of view, then, we cannot but see that iron is being already turned to account in the American towns upon principles very different from those which we are accustomed to associate with the material in England; and the question to be asked is what these principles really are.

What will perhaps first strike the observer who would begin at the beginning in his criticism is the circumstance that the use of iron castings for the miscellaneous appliances and small fittings of buildings, whether concealed or exposed, seems to be considered allowable in America, for the sake of cheapness, both to a greater extent in principle, and with a less restrained liberty in practice. In other words, the contempt of sham, which with us is now provoked so unreservedly amongst people of taste when cast-iron (of all things in the world) takes the liberty of offering an imitation of the outward presentment of superior materials and workmanship, appears to

be comparatively unknown to the Transatlantic public. This, however, is not a thing upon which we should be disposed to dwell with much seriousness. We should be content to let it pass as an inadvertency of the multitude, if we could discern in the architectural design which appeals to higher culture a disposition to place iron construction upon a better basis. But it must be at once acknowledged that some American architects are here at fault to a degree which is scarcely creditable to them.

Readers of Mr. FERGUSON'S "History of Modern Architecture" will scarcely need to be reminded of the outrageous construction of the dome of the Capitol at Washington. The circular hall, which is covered by this superficially majestic crown, is nearly 100 feet in diameter. For about 90 feet in height from the floor—that is, to the level of the general roof—there is carried up around this hall the usual solid walling of substantial thickness. But, rising 130 feet above this, the complete structure of the dome, as visible above the roof, with 50 feet added in the form of a lantern at the summit—making 180 feet in all of height—is literally made entirely of iron, including all the paraphernalia of outer cupola and inner cupola, two complete peristyles externally, and one inside. All this was completed less than twenty years ago. And all this was painted, and is repainted periodically, to represent stone masonry.

It is not to be alleged that this stupendous counterfeit would be imitated in detail now by the leading architects of the United States; but neither can it be safely said that it would not. Mr. GALE shows us domes of what may fairly be called the highest local pretensions, which, if not erected of the same prodigious magnitude, are designed on the same spurious principles of construction so far as they go. Iron-work of perfect mathematical design, as an interior hidden framework, supports a covering of slating, or of metal, or of terra-cotta, quite indiscriminately, as a mere shell for the sake of the outline, and, with a little judicious administration of current Parisian mouldings, all in thin metal, behold a dome! If such a structure, upon more rigid scrutiny, is found to contain a garret room, perhaps it may be called a roof, a curb roof, an ornamental roof, a French roof, or what not; but if it is, on the contrary, a detached cupola, erected for the admiration of architects, then it is a question whether the composition is not of less architectural merit, rather than more, when compared with the mere timber-trussing and lead-work which did duty for domes in London from fifty to a hundred years ago. Iron construction is, at any rate, not in this instance developing itself under the popular formula "design in beauty, build in truth."

But if we are inclined to disapprove of slender wire-work skeletons covered with flimsy sheet iron or thin slabs of terra-cotta, to take the place of the domes of the Renaissance, what shall we say when equally meagre framing is used for the ordinary upright walls of streets, made indeed of T-iron throughout, to which to attach by means of screws an outer cuticle of slabs, of terra-cotta or whatever other artificiality of extreme tenuity, whereby to build a house, no doubt in a few weeks, which shall possess at once all the appearance of a mansion of hewn and carved stone and all the cheapness of a trumpery railway shed? For this, we are allowed to understand, is, after all, the chief development of what is called iron construction in the great American cities. It is enough for the critic to say once for all that American ingenuity is clearly on the wrong track.

Taking, therefore, these three forms in which advanced ironwork is pushing its way on the further side of the ocean—miscellaneous imitative nicknackery, wire-woven domes, and framed slab-walls—it is impossible to say that we have anything offered to us which is worth studying; and we can only express the hope that in course of time the free genius of Americans may do better. And yet, when we contemplate such entire failures, arising in fact from an inability for the present to grasp the first artistic principles which govern building, we are led to reflect that perhaps after all it may not be on the further but on the hither shore of the Atlantic that the new building material which iron no doubt professes to be shall presently find the opportunity for its development, in the direction of sound science, coupled from the birth with graceful style. If so, however, we have not yet done much to justify the expectation. Our Crystal Palaces have not hitherto been designed with care. They continue to be too often little more than the Chatsworth greenhouses of PAXTON, their originator.



Our railway stations, with their sometimes majestic roof-framing, are unquestionably better. A minor example here and there, chiefly an interior without an exterior to correspond, may be pronounced to be very considerably in advance, so far as it goes. But a perfect interior with a perfect exterior is what we cannot point out, either for the satisfaction of the critic or the contemplation of the student; and indeed we do not know where to put our finger upon one in a foreign country. Even iron bridges are on the whole, except the very simplest of them, more displeasing than not; although no doubt the spider-web suspension bridges of America, in the eye of anyone else than a wireworker, must be regarded as the *ne plus ultra* of the entirely graceless.

It has been remarked that the attempt to make architecture out of ironwork is in itself an abandonment of the architectural principle as it has hitherto been understood—the principle, that is to say, of enduring majesty. There is a great deal in this. But if iron is to be developed as a building material, art will inevitably find its way to it and make it its own.

### ENGLISH MEDIÆVAL CASTLES.\*

THERE has long been need of a trustworthy work on the remains of the military architecture of mediæval England. At last the want has been supplied by the man who is most competent to describe the buildings. For half a century the opinion of Mr. G. T. CLARK on all questions relating to the arrangement of an old English castle or fortification has been recognised among archæologists, who are not prone to admit the existence of living authorities. The subject has been investigated by him with a marvellous patience and enthusiasm, and the fabrics have been described with photographic fidelity. At all times Mr. CLARK has been willing to give to others the benefit of his own experience, and to recognise the humblest efforts of lesser men to follow him. He has now collected in two massive volumes his essays and papers on English fortification, and they form a work which will be a treasure to archæologists, topographers, and students of history. The castles which are described are arranged in alphabetical order, beginning with Alnwick and ending with York. By this plan it is always easy to refer to any one history without trouble. It would have been a great advantage if a general index had been given. The two volumes are a mine of information, but it is not every reader who is endowed with a memory sufficiently retentive to preserve such a mass of details. One likes with a work of this kind to collate what has been said in different parts on a particular subject, and without an index the process is onerous. It must be said, however, that Mr. CLARK has ordered his description in such a way that there is a general uniformity in the arrangement of the divisions, and that as history precedes description, and the remarks on any modern restoration which may have been carried out come last, it is possible to guess the position of the statement which may be sought. An index is, however, indispensable. The majority of the descriptions are accompanied with plans and others have views, which vary in accuracy. Although there are some engravings by LE KEUX, we have no hesitation in saying that the most valuable illustrations are those of Coningsborough Castle by Mr. A. S. ELLIS, which are rightly described by Mr. CLARK as being worthy of the fortress they represent.

There is a proverb which says that an Englishman's house is his castle. Happily it has its parallel in other languages, as when the French say, "*Chiffonnier est maître dans sa chaumière*," and wherever the words are employed they are a testimony to the supremacy of law over force. A proverb of this kind is a sort of gauge of progress, for at one time it would be nonsense to speak of any structure being a castle unless it were constructed of massive masonry, and able to withstand the assaults of assailants. We have become so accustomed to regard the remains as picturesque adjuncts to a landscape that the original purpose of their existence is forgotten, and we can with difficulty realise the fact that every castle was designed with a view to war, and that it might be the chief point of attack. The first thought of the builders after obtaining the royal permit to erect a castle would there-

fore be to secure the safest position, and the second to adopt such forms for building as were considered to be safest against enemies, whether within or without. It would be as unwise in those days to seek for architectural effect as it would be now to estimate the value of a rifle by the ornamentation on the stock. But in these, as in other cases, by seeking after utility some other qualities were also found; and it can be said with truth that many English castles have, like Coningsborough, Rochester, Castle Rising, Newcastle, &c., much beauty about them. How they were designed cannot be ascertained. It is evident that from time to time there was a normal type of castle which was generally recognised as the best adapted for safety, just as in later ages there were systems of fortification; but how the Mediæval VAUBANS contrived to give their services to a number of masters must ever be a puzzle. On this subject Mr. CLARK writes:—

No such thing is known to exist as an original design or a working drawing of a Norman or even an Edwardian castle. In ecclesiastical researches, from the known uniformity of the arrangements this want is scarcely felt, but the plan and details of the castle vary with the disposition of the ground or the caprice of the builder, and although a hall, a kitchen, a chapel, a well, and a barrack are indispensable features in a castle, these parts have nothing of the regularity of position of a nave or choir, a cloister, a chapter-house or a refectory. Nevertheless, great as is the variety in both the plans and details of castles even of the same age, their architects and engineers worked by certain rules, so that if these be studied a clue will be obtained to the age of the work executed. The dimensions, plan, and profile of the earthworks, the presence, absence, or figure of the keep, the thickness of the walls, the plan, figure, proportion and position of the mural towers, the character of the entrance, the material employed, and the particulars of the masonry, all, if carefully observed, afford a clue to the date of the building, or of some of its parts, so that, as a general proposition, a Norman castle may be known from one of the Early English period, or from those of the first or second Edward, and still more readily from those built in the reign of Richard II.

Mr. CLARK in his introduction treats his subject under the following heads:—(1) Earthworks of the Post-Roman and English Periods. (2) Castles at the Conquest and under the Conqueror. (3) Castles under the Successors of the Conqueror. (4) Castles in the reign of HENRY II. (5) Castles at the latter part of the Twelfth Century. (6) The Rectangular Keep of a Norman Castle. (7) The Shell Keep. (8) Castles of the Early English Period. (9) Edwardian or Concentric Castles. In each of these divisions the reader is surprised by the great knowledge exhibited by the author, and which is based upon careful observation and research.

The position of the early mounds was not fixed by chance. Moated mounds, it has been observed, are near parish churches. They are numerous in Normandy and the pattern corresponds with the English. The inference to be drawn is that the knights who accompanied the Conqueror raised embankments around their new homes on the same plans as those which had protected their Norman houses. Another form of mound—called a moot-hill or a toot-hill—was without a ditch, and therefore was accessible for civil assemblies. The name lingers in Tothill Street, Westminster, although there is no trace of a mound. Earthworks appear to have been the strongest kind of defence in England at the time of the Conquest. It has been often asserted that there were no Saxon houses of stone. Whether this is true or not, there seems to be no doubt that "save a fragment of a wall at Corfe, no military masonry decidedly older than that event has as yet been discovered." WILLIAM was aware of the advantage of castles to enable him to retain his hold upon his new possessions, but he also knew that there was danger in the existence of nobles who were able to defy the law from behind the walls. The control of all castles was therefore claimed by the Crown. Two kinds were erected, one in masonry, the other of timber, and of the former there were two types—the selection being apparently determined by suitability to a position which had been occupied by an earthwork:—

The castles of the eleventh and twelfth centuries, whether in Normandy or in England, were of two distinct types, those with the rectangular and those with the shell keep. The former type was almost always employed when the site selected was a new one; the latter, where the site was old, and where there existed a "motte" or mound. There are exceptions to this; that is to say, the rectangular keep is occasionally found on an old site, but the shell keep is never found on a new one. The distinction was

\* *Mediæval Military Architecture in England.* By G. T. CLARK. Wyman & Sons.



mainly due to the fact that the massive heavy tower could only be safely founded upon solid ground, whereas the lighter and more widely-distributed weight of the shell keep was better suited to that which was artificial. The shell keep was the most numerous of the two; but the tower type, being of a more solid and more durable character, has lasted longest, and is at this time so much the most common that it has been designated by writers of authority as the type, instead of as but one of the two types, of a Norman keep.

In England we have about fifty extant or well-recorded examples of rectangular keeps, of which the earliest is the White Tower. There are forty examples more or less perfect of the shell keep. The next marked type that came into favour was one with cylindrical towers or donjons. The finest example of the Early English castle is to be found not in this country but in France, at Coucy, a building on which the late VIOLLET LE DUC was enabled to work without any stint of funds. The principle of cylindricity was carried much further in the concentric castles of the Edwardian period, of which some fine examples are found in Wales. Mr. CLARK describes those buildings at a length that is proportionate to their importance, the largest space having been devoted to the Tower of London.

The restoration of an English castle is not always entrusted to competent hands, but there have been notable exceptions. The first place should always be given to what was done for the Marquis of BUTE at Cardiff and Castle Coch. Mr. CLARK testifies that at the latter "the restoration is very complete indeed, in excellent taste, and in strict accordance with what has been ascertained of the original structure." Cardiff Castle has been, he says, completely remodelled; "the details are in that semi-Italian style in which BURGESS was so great a master, and all that a very refined taste, on the part of both the owner and the architect, could devise, has been executed in a manner and with a profusion which more than rivals Alnwick." The phrase "semi-Italian" may induce some readers of the book to draw an erroneous conclusion respecting the beautiful work that is found at Cardiff, and which has no resemblance to the Italian work introduced at Alnwick by CANINA. In one case we have Gothic in all its luxuriance, in the other there is some of the coldness which characterises Italian Renaissance when transplanted from its native soil. The incongruity between exterior and interior which is apparent in Alnwick is not felt at Cardiff. The late Mr. SALVIN restored a few castles, and generally with sound judgment. He almost rebuilt Alnwick Castle; but, according to Mr. CLARK, he preserved with scrupulous care all that admitted of preservation, "adapting his new work to the period of the first and second PERCY, the founders of the later castle." At Dunster, in Somerset, he carried out some extensive works, including a tower and additions to the Elizabethan house.

### PARIS NOTES.

SATURDAY was the last day for the reception of paintings destined for the Salon, and a busy scene, enlivened by a glorious sun, was enacted in and around the Palais de l'Industrie. All through the day artists were arriving in scores, some bringing their exhibits in cabs, others in hand-carts, and still others in the humble wheelbarrow. At six o'clock the doors were mercilessly closed, with the result that several would-be exhibitors had to go disappointed away. On Monday the election of the jury for the painting section was held amid unusual excitement, owing to the numerous rival lists that had been put forward and the uncertainty of the result. The poll was open from 9 A.M. to 4 P.M., being presided over in turns by MM. Bonnat, Yon, Jules Lefebvre, and Humbert—officers of the *Société des Artistes Français*. It must be noted that this body had caused a notice to be posted indicating that the "Association remained aloof from the election struggle and patronised no candidature whatever." The counting of the votes lasted from five o'clock until two on Tuesday morning, and was found to give the following results:—MM. Henner, 1,313; Harpignies, 1,251; Bonnat, 1,230; François, 1,206; Vollon, 1,199; Jean-Paul Laurens, 1,168; Tony Robert-Fleury, 1,154; Puvis de Chavannes, 1,123; Jules Lefebvre, 1,122; Bouguereau, 1,108; Cabanel, 1,069; H. Pille, 1,057; Busson, 1,055; Duez, 1,040; Ribot, 1,006; Lalanne, 1,005; Humbert, 1,001; Hector le Roux, 948; de Vuillefroy, 942; Bernier, 937; Guillemet, 926; Carolus Duran, 920; Roll, 884;

Rapin, 870; Barrias, 862; Maignan, 834; Yon, 821; Detaille, 812; Lansyer, 797; Feyen-Perrin, 787; G. Hanoteau, 775; Baudry, 751; Benjamin Constant, 750; O. Boulanger, 748; H. Gervex, 709; de Neuville, 693; Luminais, 609; Guillaumet, 606; Jules Breton, 596; and Cormon, 568. In addition to these forty members of the jury proper, the following were named as supplementary jurors:—MM. Renouf, 553; Bastien-Lepage, 552; Van Marck, 531; Cazin, 525; Saint-Pierre, 470; Delaunay, 466; Lapostollet, 450; Hébert, 458; L. Lhermitte, 453; and Protais, 444.

No less than 7,000 oil paintings, water-colours, and drawings have this year been sent in for examination. In the section of sculpture, medallion and jewel engraving, exhibits must be delivered to the Palais de l'Industrie between March 21 and April 10; in the architectural section from April 2 to April 5; and in the section of engraving and lithography, from April 2 to April 5 also. The elections for the juries of these several sections will be held on April 11, April 7, and April 6 respectively.

The Salon Managing Committee have decided that no work of art that was exhibited in the National Triennial Exhibition of last autumn shall be admitted to the Salon. It has also declined to accept an offer made by the Edison Electric Light Company to light up the Salon in the evening on condition of receiving one-half the receipts.

The two bronze groups by Cain, so much noticed at the last Salon, and representing respectively a lion and lioness quarrelling over the carcase of a boar, and a combat between two tigers and a rhinoceros, are to be placed one on each side of the ground flight of steps in the Tuileries Gardens, facing the Rue Castiglione.

The painting by M. Roll, representing the passage of troops on the Place de la République on their return from a distribution of colours, has been presented by the State (which purchased it from the Salon of 1882) to the City of Paris, and will be placed in the new Hôtel-de-Ville.

The Syndical Chambers of the Paris Trades announce an exhibition of their manufactures for May 1, to last three months. It is to be held in the Salle des Etats at the Tuileries, and will comprise two distinct sections. The exhibits on the modern side will consist of jewellery, precious stones, bronzes, enamels, coins, and medals, &c., while the retrospective section will comprise collections of similar articles to be lent by private individuals and the State, among which will appear the famous French Crown jewels. As these are shortly to be disposed of by public auction, it will probably prove the very last occasion for their inspection. The Syndical Chambers pursue a double object:—First, to show what the Parisian artisan has already accomplished, and is able to do; and next, to raise funds for the encouragement of industrial art, and the alleviation, as far as may be, of the existing crisis. They already keep up several schools of design and professional establishments in the shape of industrial museums; while another good work they are striving to realise is the creation of an industrial asylum for the reception of children abandoned by their parents, whose unruly spirits or vices preclude the idea of their being apprenticed to private masters. For this purpose the Prefect of the Seine, at their suggestion, is negotiating with the State for the acquisition of the Iseure estate.

The first stage of the competition for the Grand Prix de Rome in architecture has resulted in the admission to *loges* of the following young artists, ranked in order of merit:—(1) M. Maillard, pupil of M. Guadet; (2) M. Devienne, pupil of MM. Simonnet, Coquart, and Gerhardt; (3) M. D'Espony, pupil of M. Daumet; (4) M. Debie, pupil of M. Gnadet; (5) M. Pierre André, pupil of M. André; (6) M. Lafon, pupil of M. André; (7) M. Marcel, pupil of M. André; (8) M. Quatesons, pupil of M. Pascal; (9) M. Louvet, pupil of MM. Louvet and Ginain; (10) M. Defrasse, pupil of M. André. The subject given for this preliminary competition was the plan of a polytechnic school or college.

Eight artists have been admitted to take part in the second stage of the competition for the Grand Prix in medallion and jewel engraving, in which competitors have to undergo two ordeals



previous to entering *loges*. In this stage the work set consists in modelling a nude figure in bas-relief on a ground 26 inches by 20 inches. It must be executed in four sittings of seven hours each, and the relief of the figure is not to exceed 6 centimètres ( $2\frac{2}{5}$  inches).

It may not be generally known that every competitor for the Grand Prix de Rome is entitled to a certain indemnity, the amount of which is at present fixed at 300 frs. for painters and sculptors, 200 frs. for architects and engravers, and 100 frs. for musicians. A petition is now being signed among students of the three last-named branches, praying the Minister of Public Instruction and Fine Arts to put them on a par with their *confrères* of the brush and chisel.

The Biennial Prize, founded in connection with the Académie des Beaux-Arts by the late M. Viollet le Duc, to encourage the study of the higher branches of architectonic art, will be offered for competition this year. Essays must be sent in to the secretary of the Academy before the 1st of next month, and those that take prizes will remain the property of the Academy. The declared object of the founder was to "determine as far as possible, by special study and research, the style and form of the elements of modern architecture."

Another relic of old Paris, the Rue Vauvilliers, is about to disappear to make room for an extension of the Halles Centrales. This narrow thoroughfare contains, or did contain, several hotels or restaurants that once enjoyed a great celebrity, chief among them being the "Pied de Mouton," the "Soleil d'Or," the "Vieux Bouchon," and the "Chat qui pélite," an inn which dated from the early years of Louis XV's reign. There still exist a dancing-room, and a little barber's shop, more than a century old. The street was once called the Rue du Four, as it contained the public baking-oven kept up by the Bishop of Paris; and under Louis XV. and XVI. it was the headquarters of the pottery and glass trades. Lavoisier inhabited a house in the Rue Vauvilliers in 1769, and it is said that Napoleon I., when a lieutenant of Artillery, lodged at the Hôtel de Cherbourg, adjoining the "Pied de Mouton."

A measure similar to that recently carried out at the National Library is about to be adopted for the National Archives Office and Ecole des Chartes. This building, in which priceless documentary treasures bearing upon the history of France and Europe are contained, is surrounded by workshops in the midst of a densely-populated neighbourhood, and thus greatly exposed to destruction by fire. A chemical manufactory, in fact, adjoins the Archives. The Government now propose to expend two million francs in buying the surrounding houses; so as to completely isolate the building, and give room for enlarging it at some future time. There are said to be upwards of 30 million portfolios of papers piled up within the walls, and to them access can be obtained at present only with great difficulty. The proper classification of papers sent in by the various Government offices is also quite impossible.

Two arcades from the Tuileries Palace have been preserved, and will be shortly erected in the gardens facing their old site near the Orangery. One of these formed part of the right wing of the Pavillon de l'Horloge, and is the work of Philibert Delorme himself; the other, from the left wing of the same, was executed by Jean Bullant.

The Exhibition of the Aquarellistes in the Rue de Sèze will close on Sunday next, the 23rd, after which the galleries will be placed at the disposal of Madame Louis Leloir, for the exhibition and sale of the works of her late husband.

M. de Sabouloff, formerly Russian Ambassador at Berlin, has sold his celebrated collection of Tanagra figures, collected during his residence as Minister at Athens, to the Swiss Government, for 375,000 frs. It is also stated in the Paris papers that the remainder of his collection of antiquities has been purchased by England for the sum of 25,000*l*.

A commemorative tablet is to be erected at the Ecole des Beaux-Arts in honour of the great painter Louis David, whose

remains are interred at Brussels, where he died in exile. The inscription will be as follows:—"To Jacques Louis David, restorer of the modern school of painting in France; born in Paris on August 18, 1748; deceased at Brussels on December 29, 1825."

### THE ARCHITECTURAL ASSOCIATION.

THE ninth ordinary meeting of the Association was held on Friday evening, the 14th inst., Mr. Cole A. Adams, president, in the chair. The following gentlemen were elected members:—Messrs. F. W. Marks, R. W. Sampson, H. G. Driver, C. H. Driver, J. P. Oliver, C. J. A. Steven, J. G. Hart, W. A. Chambers, D. Blow, and H. Messer. A vote of thanks was then passed to Mr. Gribble in connection with the late visit to the Brompton Oratory. The next visit was announced for Saturday, the 22nd inst., to Mr. MacVicar Anderson's National Scottish Church, Belgravia.

Mr. A. B. PITE presented the Sketch-book of the Boston Architectural Association, which that Society had just sent for presentation to the Association. He said that those who looked into the book would rather tremble for their spurs, and he hoped that one effect of the gift would be that they would all be stirred up in the matter of sketching.

The PRESIDENT said the Association would feel great pleasure in forwarding by the hon. secretaries their thanks to the Boston Architectural Association. He agreed with Mr. Pite as to the excellence of the sketches, but he was not prepared to surrender the palm to their friends across the water in the matter of sketching. A vote of thanks was passed.

Mr. HAMPDEN W. PRATT then read a paper, as follows, on

#### "Shams."

I feel I must claim your indulgence in addressing you this evening on the subject which I have chosen, for I must of necessity traverse familiar ground and dwell on principles which have constantly engaged our thoughts. But believing as I do, in putting more into practice the true principles which we profess, and which underlie all good art, I have ventured to bring before you some few methods of construction we adopt and materials we use, with the view of considering how far we legitimately employ such, and wherein we fail to attain the standard of perfection. As architects, we should do all in our power to uphold the dignity of our noble art; in other hands much is done in the name of architecture which makes our blood boil, and we must look to it that we ourselves are blameless, and endeavour to maintain the glorious traditions of the past and hand down to posterity works, whether great or small, which are worthy of the age we live in. No work should be considered too insignificant to receive honest thought, for if we are not careful in the small things, the probability is we shall neglect to some extent the more important ones. Let us remember that the foundation of all good work is Truth, and that to be beautiful it must be truthful.

When I joined the ranks of this Association some fourteen years ago, and worked in the class of design, I found myself surrounded by students who looked upon honesty in construction as an essential condition of good design, and if a member of the class ventured to produce anything of doubtful character, he was well and deservedly sat upon. Such training was calculated to impress upon one the paramount importance and necessity of adhering to all risks to truthful design. It was no mere slavish acceptance of a principle, but an eager and enthusiastic compliance. I need hardly say, perhaps, that most of the members were at that time ardent disciples of the Gothic school, and it was considered as utterly opposed to the principles of that style, to adopt anything but what was perfectly straightforward, honest, and true. I do not know how far honest principles govern design in the class at this period, and under the influence of the current fashion in style. My fear is that conscience in these days is more elastic, and that there is a tendency to strain a point here and ignore one there. Are we not inclined to be too lax nowadays? Things which the Goths a few years ago would have scorned to do, they now unhesitatingly put their names to, and a race of young architects will be springing up presently, who will have no masters to look up to for inspiration and guidance in the way they should go, unless they give more heed to the traditions of the good old days, and drink more deeply at the fountain-head.

Now the view I take of "shams" is a broad one; if it were not so, I might say in a few words all that could be said in denunciation of them, and few or none would dissent, I imagine; but I am not prepared to dismiss the subject in so off-hand a way. The truth is we are too much inclined to palliation in these matters; we endeavour to quiet our conscience (if we have not lost it), and we say, that life is too short to burden ourselves with unnecessary cares and anxieties. A sham may be defined, not only as a deception or an imitation, but also as an imposition and a pretence. To be "tricky" is thought by many to be clever, but we should denounce a man who, by devices or tricks, took advantage of us, however clever he might be. If we avoid shams of all sorts, and



produce work in every respect unsullied, we should become "purists," and you will say that there can be no such position tenable. No doubt there are many difficulties to contend with, that it is not easy to practise all we preach, but may we not at least set a high ideal before us, and strive with what powers and faculties we possess to impress our work with the genuine stamp, and raise architecture above mere building?

It is far from my purpose to decry picturesqueness, for one can only wish to see more relief from the dull, commonplace, utterly uninteresting buildings which abound everywhere; but I think there can be too much of a good thing, and on looking around one is disposed to say that there is a tendency to overdo it. Some, apparently, have a strong desire to be original—too original. Features are introduced by the grafting process; the growth is not natural; there is what one would call a straining after effect. May not this be rightly characterised as *pretence*? Disquieting, fidgety forms and details are to be reprobated; they should have no place in our work; they are excrescences, and as such must be regarded as fictitious. Then, with respect to the harmonious blending of interior and exterior design, much might be said; if we could do more to make our exteriors reflect the interior arrangement and purpose, we should accomplish much in the direction of natural development and treatment; there would be more reality about our architecture, and less of the masking propensity. Take, for instance, the treatment of staircases. I regard it as an unpardonable sin to disregard window openings in planning a staircase, or to take no notice of the stairs when designing an elevation, and yet this is being perpetrated every day, and, one regrets to say, unblushingly. I cannot defend the practice. It shows to my mind either poverty of invention on the part of the architect, or wilful disregard of fitness and truth. It is not only with staircases, but with other parts, that the plan is made subservient to the elevation. Windows, fireplaces, and doors are placed in all sorts of awkward positions, regardless alike of comfort, convenience, and health. How frequently it happens that windows are placed nearer the floor than the ceiling, so as to accommodate some fine cornice, or to fulfil the requirements of some order or other! Is this honest treatment? If a style is not capable of being adapted to the requirements of a building, then better by far adopt some other or none at all. Why sacrifice common sense and honest treatment for the sake of a style, or in order to gratify some conceit? Blank windows and doors are not very often met with in an architect's work, and it is to be hoped that he is never guilty of painting false fanlights, sashes, and blinds complete, such as may be seen sometimes. I am aware that architects have difficulty sometimes in dealing with clients, who insist that symmetry cannot be obtained apart from uniformity; and, as a consequence, windows are inserted in the wrong place, and useless features introduced, in order to gratify the wish of those who possess no true eye for balance and proportion. It is this class of people, too, who are dreadfully afraid of putting a tower on one side of a gable, and think the design is incomplete without a corresponding one on the other side, and they have been known to liken such a building to a pig with one ear. Speaking on this subject reminds me that a tower is often introduced and used in a meaningless way, and I am disposed to question the practice of building towers where they are of no use, and especially when louvred openings are formed, where bells are never intended to be hung, and in towers incapable of standing the vibration.

Street architecture has done much to spoil architects for other work; it consists as a rule of a façade, and this idea is too often introduced into a building, even when wholly detached; in other words, perspective is not sufficiently studied. It is a very edifying sight to have a back view of our street fronts from the chimney-pot level, such as we may obtain from the railways passing through the metropolis. It gives us an insight into the efforts often made to secure a commanding or picturesque front, as seen from the street. It will be remembered how the new *Times* office, in Queen Victoria Street, was erected with a large crowning gable, without any roof behind, until public ridicule was brought to bear upon it. The shop-front itself is, however, generally the most unsatisfactory feature in street architecture. Many a building, otherwise good, has been entirely ruined in appearance, owing to the lamentable want of support for the upper storeys—that is, sufficient to satisfy the eye. Every contrivance is adopted to conceal what support there is; columns and stanchions are stowed away mysteriously, and stone facias are bolted and hung up to iron girders in a wonderful way; the apparent strength, without the substance, of polished granite is brought into requisition for pilasters and piers, as in five cases out of six only a veneer of the material is applied. It wouldn't be right for me to blame architects entirely for this kind of construction, doubtless they are often hampered by their clients; but, nevertheless, I think it is their duty whenever opportunity offers, to persuade those who employ them to adopt a sounder, truer, and more satisfactory construction.

Coming now to the question of materials for building purposes, one must express their regret that buildings are fast losing their local character, owing to the increased facilities for bringing materials from distant parts. I am not prepared to say that there are no advantages in this, but I think we should, when possible,

make use of suitable materials at hand, and not go out of our way quite so much to introduce one thing and another. The question of using the right material in the right place, and for the right purpose, ought also to receive at our hands a great deal more consideration than it usually does. Touching the use of manufactured materials, it may be asked how far it is legitimate to use some of these? Bricks have been made from time immemorial of all shapes, sizes, colour, and contour, but I suppose it was not until the last century that they were shaped and worked after being burnt. At the present time there seems to be quite a mania for cut, rubbed, carved, and gauged brickwork, and I would respectfully ask those who defend this treatment, whether they really consider it legitimate? It seems to me a strange, not to say wrong, use to make of bricks. Most marvellous productions of the joiner-bricklayer's art may be seen almost anywhere—bricks cut and carved like soap, and jointed with putty. Strange construction some of this! Terra-cotta has been largely used, and, properly applied, it is a most valuable material. Artificial stone does not sound nice, but I think it may be used legitimately for paving, steps, and such purposes; but for moulded and carved work, and where hand-labour should be bestowed, I think natural stone ought alone to be used. Stucco has never been favourably received, except by speculative builders, who, at comparatively small expense, produce the forms and details appertaining to stone structures. It is needless to say that this treatment is entirely imitative, and unworthy of adoption by any architect. I will say no more on this point. Mr. Aston Webb, in his recent interesting paper on "Plaster-work," alluded to stucco-work in words which I heartily endorse. Of iron it is difficult to speak. It is probable that we are at present only on the threshold of its career; but it is to be sincerely hoped that the day will never come when whole iron fronts will supersede brick and stone construction in this country, as in some parts of America. Fancy describing galvanised iron cornices, window-cills, pilasters, and what not! Such construction seems repugnant to one's sense of fitness, and, as carried out across the Atlantic, must bear a strong resemblance to stone construction. One of our chief faults is in making cast iron to resemble and imitate wrought and hammered work, and architects are very often much to blame in this respect. As a structural material, iron is invaluable; but it is now a recognised fact that to withstand fire it must be encased. This concealment we must accept as lawful, though, I admit, not wholly satisfactory; and I think we ought to make some effort to carry out this encasing in such a way as to show the purpose for which it is employed. One word before leaving the subject of iron. I think architects are too fond of substituting rolled iron joists for brains. If a little difficulty arises in planning or construction, the problem is apt to be solved by the friendly use of iron girders or joists. They are made too much a convenience of, and I think we ought to recognise this.

Half-timber construction calls for some notice. I fear a great deal of the so-called half-timber work is considerably more than half brickwork, by which it is so often backed; and a good deal of it is merely a piece of framework 2 or 3 inches in thickness. Such construction is not worthy of the name, and can only be characterised as sham.

Then as to mouldings in joiners' work, it is getting almost a rare thing to see mouldings worked on the solid. Mouldings are planted on, stuck, and bracketed out, without any compunction; brads, screws, and glue taking the place of what was formerly sound, solid construction. I know it will be admitted, that you would prefer to have solid moulded work, if expense were no object; but this admission only proves that you endeavour to obtain the effect of solid work by the sacrifice of principle. Why not be content with simpler work legitimately executed?

I have referred hitherto, more particularly, to what may be termed structural pretences. I should like now to say a word on those more strictly decorative, and it is in this direction where imitations abound. Marble, being a costly material, is in great demand, and there is an abundant supply of clever imitations. It surprises me to see architects so frequently using scagliola; it is a downright sham, of course, and so are all the marbles made of slate, and it would be a great blessing if all this false stuff could be swept away. Chimneypieces, perhaps more than anything else, are conspicuous features in a room, and how often they are constructed of false material, and boxed out to appear solid. If people are accustomed to endure false things at their hearth, no wonder they will put up with, not to say revel in, all sorts of imitations and deceptions elsewhere. The marble mania also extends to painting or marbling, even to the absurdity of making a metal bath resemble marble! Porcelain is also marbled, and the difficulty is sometimes to obtain goods of this class which are not imitations.

Graining is an old device, and seems never likely to die out. Trade decorators are perhaps most responsible for its survival; give such a man *carte blanche* to decorate your house, and I believe he would grain or marble it from top to bottom! Of late years a good deal of walnut wood has been used, and now walnut instead of oak graining is beginning to be used. If our friend the decorator takes a fancy to this sort of wood, we shall be one day nauseated with walnut graining. It is a poor excuse which people offer for graining, when they say that it is done to preserve the wood, and wears ever so much better than paint. One thing they



omit to add is that the woodwork grained is of an inferior kind to that imitated—herein is the dishonesty. I don't say that one is deceived into believing that the graining is the natural wood, but it is none the less a fraud. What shall we say, too, for veneering? Veneering of wood hardly comes within the range of an architect's work, it is more in the cabinet-maker's line, and it is to be hoped architects will give no countenance to this method when they are called upon to design furniture.

But we are often concerned, not only with things we design, but with articles we select; and it is necessary that we should follow the same principles in one as in the other. The market is flooded with imitations of all sorts; we must be on our guard lest we unwittingly encourage the manufacture of that which is false. It is within our power, possibly, to create and maintain a healthy tone, and we should let no opportunity pass for condemning what we believe to be bad and unprincipled. There is more temptation to produce imitations with the manufacture of new materials, or the introduction of new inventions, and therefore we should carefully watch such and give no encouragement to things of a doubtful or dishonest nature.

With the general adoption of the electric light, we shall be called upon to consider the appropriateness of fittings for it. We are too conservative in this respect, I think; there is too much resemblance, for instance, between the fittings used for candles, gas, and the electric light, and imitations easily creep in. An example of what I mean you will find in the Arbitration room in this building, where the gas in the chandelier passes through imitation candles—a very senseless contrivance, I think. I don't know who admires such things, I shouldn't think architects do; and yet, this particular chandelier is placed in a room mostly used by such. But probably you will not attach much importance to that, for you will agree with me, that the ventilation of this room is a sham, and, if we were anybody else than architects, I expect we should have called for, or applied a remedy, by this time.

In conclusion, let me urge upon all those who are just entering the profession to resolve only to practise the things that are true, to shun all excess, to let the lamp of truth guide them throughout their career, and to remember that the sin no beauty can redeem is sham.

The PRESIDENT condemned the use of shams, but observed that what were and what were not shams was a question open to argument. He then put forward reasons justifying many of the practices which Mr. Pratt had dealt with. Carved and gauged brickwork was peculiarly suited to withstand the London climate, and it remained quite as sharp as when first put, while stonework, on the contrary, rapidly began to flake away. By the use of cast materials, concrete, &c., a durable and impermeable surface was obtained, and at a moderate cost. Besides this, its colour was pleasing, and it had, moreover, been used by leading architects. Purists would have iron construction when used shown, but in the work of nature they found that the framework of bones in a man's body, his ribs, &c., were clothed with flesh, and this was a justification for seeking to clothe iron construction with beautiful forms. There was no deception in these things. The decoration round the stalls at Worcester College, Oxford, was in marbling, done, he had been told, by Mr. Burges. That gentleman no doubt had recognised the beauty of line and colour in marble, and designed to reproduce this beauty as a colour effect for decorative purposes. Simple painting required renewing every few years. Graining did not. Graining would wash well and come up richer in effect every time it was cleaned. In the matter of veneering, Mr. Burges had proposed to carry out the decoration of St. Paul's by veneering it with slabs of marble. It would, therefore, be seen that in carrying their desire for truth too far they might possibly overstep the mark, and fall back on a quaker-like simplicity altogether unsuitable to the present age.

Mr. A. B. PITE proposed a vote of thanks to Mr. Pratt for his paper. He said he thought they ought to distinguish between imitations and simple shams, for it was quite possible to imitate without producing a sham.

Mr. STANNUS seconded the vote of thanks, and said that the President had, he thought, shown that many things Mr. Pratt had treated as shams deceived no one. The use of veneering was quite allowable under certain circumstances, and when done according to proper rules. If it were allowable only to use solid materials, gilding must be condemned. Instead of setting men to beat out gold into leaf, one would have to put up solid gold. Mr. Burges, he believed, had felt there was a wealth and changefulness of colour in marble that no other material would give, and, not being perhaps allowed by the authorities to use marble, he no doubt determined to get the same beautiful effect by a cheaper method. Mr. Pratt had no doubt held up a high standard before them, so that he might get them to meet him half-way, and end by being temperate and consistent, just in the same way as teetotalers had succeeded in making many men temperate because they had taken the highest ground; because they insisted on teetotalism. People would not meet them so far as that, though they would meet them half-way in the matter of being temperate.

Mr. GOTCH said that in the Association they strove for the ideal. He had started with very correct principles, but he soon found, in regard of architects carrying out shams, that they all

did it. Clients insisted in many cases on the perpetration of shams, and he did not remember any case in which an architect had thrown up his commission rather than do these wicked things. He thought himself that it was rather a good thing to let such a client imprint his individuality on his house, viz. the individuality of a man of no taste.

Mr. BRODIE and Mr. BERRY, hon. secretary, then made some remarks.

Mr. MOUNTFORD said he agreed with every word that Mr. Pratt had said, but thought there were several shams that had been overlooked—one, for instance, was the fusion of one or more styles in a building.

The vote was then put and carried by acclamation.

Mr. PRATT, in replying, acknowledged that he had put his subject somewhat in an hypothetical way, and he quite agreed with the various speakers as to the impossibility of carrying out his advice strictly. If the ideal were a high one, they would, as Mr. Stannus said, rise half-way, more than which could not be expected.

## DISCOVERY OF A ROMAN ALTAR.

THE following account of the Roman altar discovered by workmen in digging the foundations of the new tower of St. Swithin's Church, Lincoln, has been given by the Rev. Canon Venables:—This interesting relic of a remote past stands 3 feet in height, by 1 foot 8 inches in breadth at the base, and 1 foot  $3\frac{1}{2}$  inches in the upper part; the corresponding depths are 1 foot 2 inches, and  $12\frac{1}{2}$  inches. The altar is hewn out of a single block of oolite, of the same bed from which the Roman arch at Newport Gate was built, and belonging probably to the same period; perhaps, early in the second century of our era. The upper part is unfortunately mutilated, and there are hardly any traces of the basin-shaped cavity or *focus* in which the sacrifice was consumed. Each side is carved in low relief; the right hand side bearing the *praefriculus* or pitcher containing the wine for the libation, the left hand side the *patra* or shallow dish used for pouring the wine upon the offering. The sacrificial knife, which is a usual companion of these vessels on Roman altars, is wanting. The inscription on the face is happily perfect, the letters being nearly as sharp as the day they were first cut. It is as follows:—

PARCIS. DEA  
BVS. ET. M  
MINIBVS. AUG  
C ANTISTIVS  
FRONTINVS  
CVRATOR. TER  
AR. D. S. D.

Which may be thus rendered, "To the goddesses, the Fates, and to the Deities of Augustus, Caius Antistius Frontionus, being curator for the third time, erects this altar at his own cost." The last three letters are a common contraction for "*de suo dat.*" A word or two may be added concerning the dedication of the altar, and the person who dedicated it. Hitherto only three altars dedicated to the "Parcae," or Fates, have been found in Britain; at least only three are recorded in Hubner's great work. All of these belong to the Carlisle district, viz. two found in Carlisle itself, and one near Silloth. In two of these the Fates are designated as "Mothers," "*Matribus Parcis*," not "Goddesses," as here. This is what we might expect, for the Fates was only another name for the Mother Goddesses, "*Deæ Matis*," whose worship was a favourite one among all the Teutonic races. Roman monuments, commemorating these goddesses, are far from uncommon in Britain. One was found some years ago at Ancaster, and, according to Mr. Thomas Wright, one also at Lincoln. This is perhaps now in the British Museum. An altar dedicated to them has been found at York, and they are frequent in the vicinity of the Roman wall. These local deities answer to the *waelcyrian* of the Anglo-Saxons, transformed by Shakespeare into his three witches of Macbeth, answered to the "*Parcae*" of the Romans, or the "*Tre Fate*" of the Italians, and were regarded as having the life and death and fortunes of mankind at their disposal. They were always three in number. The dedicator of the altar, Caius Antistius Frontionus, is described as holding the office of "curator" or "warden" for the third time. "Curator" is a general term applying, among other matters, to those who had charge of the roads, the navigation, the water supply, the games, &c. It was also a military office. There is an epitaph at Chester to one who had been curator of the second "*ala*" of the Asturian troops, a regiment of which it is interesting to notice the officers, whose funeral slab now in the cloisters was dug up at the foot of Motherby Hill, was a "*decurio*." The second dedication "to the deities of Augustus" has reference not to the deities worshipped by Augustus but to the Superior himself, whose "*memer*" or divinity was, as is well known, a constant object of adoration. The plural form is found on many altars in the vicinity of the Roman wall, being employed to add dignity to the phrase. The name "Antistius" appears in several inscriptions, one of which, now



in the British Museum, was found in Lincoln. That, however, belonged to a different person, "Antistius Adventus," of the 14th legion. Another Antistius, commemorated at Maryport, was commander of the first cohort of Spanish cavalry. The cognomen or surname "Frontionus" is of less frequent occurrence. It is found chiefly as the name of a potter, whose workshop stamp is borne by many fragments of Roman earthenware. Enough has been said to indicate the great interest attaching to this monument. May I add that the Dean and Chapter will be happy to act as guardians of it, and give it a place with the Roman milestone and other relics in the cloisters, until it is claimed for the museum which must soon be established in our historic city.

### THE WATER SUPPLY OF LONDON.

THE discussion on General Rundall's paper on "A System of National Water Regulation," which was read at a meeting of the Society of Arts on the 12th inst., was opened by Sir Robert Rawlinson, C.B., who spoke as follows:—Mr. Ruskin some time since recommended compensating reservoirs to regulate the floods in Italian rivers; but if he knew as much about floods as he said he knew about pictures, he would never have hazarded any such remarks. Reservoirs might be made for any purpose, and he did not disparage them for the purpose of canals or water supply, but as to making compensation reservoirs to regulate or diminish river floods all the capital in the country would not do it. Such reservoirs must be either full or empty; if they were full they would be of no use, as they would hold no more water, and if they were empty, probably two days' very heavy rain would fill them. In a small area he had under his own control, where the dry-weather flow was about 250,000 gallons per day for months continuously, the flood flow was in one day upwards of 90,000,000 gallons. What size, then, must be the compensating reservoirs for such a district? Where would you find the sites or the money necessary to make compensating reservoirs for the Thames? Last week he went down to inspect the water supply recently formed for the town of Leeds; not quite finished. The reservoirs were about the finest he had ever seen; they were in the valley of the Wharfe, three in number, one below the other; they cost from 150,000*l.* to 200,000*l.* each, and were capable of impounding 20,000,000 gallons per day. Out of that they were obliged to send 6,000,000 for compensation, leaving 14,000,000 for Leeds, and at one point they had pumping power by which they could raise 6,000,000 more if required. Those works, with the necessary distributing apparatus, had cost some 1,500,000*l.*, the population being about 320,000, or about 5*l.* per head. The metropolitan water supply took each day about 150,000,000 gallons of water from the Thames, the Lea, and the chalk springs, equal to about one-third the dry-weather flow of the Thames; but the quantity actually taken from that river was about 80,000,000 gallons. The various works were valued by Mr. Smith for the late Government at 33,000,000*l.*, but the present Government repudiated the bargain, and denounced it as a job. As an engineer, having some knowledge of the value of water-works, he said it was not a job; he believed it was as honest a valuation as ever was made, by as able a man as ever undertook such a task, and that London would never again have so good a bargain offered it. He made this remark because the subject must come up again. He quite agreed with General Rundall, that the utilisation of water should, in many respects, be both national and municipal. Water should not be dealt with like sugar, butter, or beer; it should not be dealt out so as to produce the largest dividend, but should be so stored that it could be utilised by the community at the cheapest cost, and that all surplus might be used for public purposes at prime cost. Dwellers in London knew what a condition the streets and footways were in after two or three small falls of rain; but if the water-supply were in the hands of the municipality, every public footway might be washed with water, not costing more than  $\frac{1}{4}$ *d.* per 1,000 gallons, instead of 6*d.* or 8*d.*, as was charged by the companies now; and they would then be made as clean as they were after a heavy thunderstorm, every week, and every day, if necessary. All the great municipal bodies were acquiring the water-supply in the same way as London would have to do, if any municipal body were established which could have the control of it. They would have to pay a fair and honest price for it, not a confiscating price. That price would necessarily be large, but it would not be dear, if in future they had no more dividends to pay, but only the interest on the capital, which a community like London could borrow at  $3\frac{1}{4}$  per cent. The companies were now paying 8, 10, and 12 per cent., hence the great value they put on their works; and as the works extended, that interest went on in the same ratio on a larger capital. If the municipality had the works, they would only have to pay the cost of management, and by consolidation from 50,000*l.* to 100,000*l.* a year might be saved in management. It was just the same with regard to gas. Manchester, Birmingham, and Leeds had acquired the gas. Leeds gave a large price for the existing works, but they now supplied gas at 1*s.* 10*d.* per 1,000 feet, and made a surplus. In Birmingham there was not a man in the Corporation who dared

to face the large expenditure involved in purchasing the water and gas works until Mr. Chamberlain became mayor, the idea being that it would saddle the town with an enormous debt, forgetting that when you bought a paying property you were not incurring a debt, but acquiring an estate. In 1852 he valued the Birmingham Waterworks, and they could then have been bought for some 350,000*l.*; but they were afraid of it. When Mr. Chamberlain became mayor he showed them that they had been losing about 7,000*l.* a-year by not having bought them, and they then gave some 1,250,000*l.* They had been considerably enlarged, the result being that the water was cheaper and better in quality, and was distributed over a wider area, and produced an income which more than paid the interest on the capital and maintained the works in efficiency.

### THE NEW YORK PRODUCE EXCHANGE.

THE new buildings which are in course of erection for "The New York Produce Exchange," will excel in magnitude any commercial building in Europe. The buildings stand on a site facing Broadway, and forming part of Whitehall Street; they can also be approached from Stone and Beaver Streets by means of a new street. No more desirable or convenient site could be found in all New York. The windows in the front of the building will open on the Bowling Green, and in the immediate vicinity is the Battery Park, and beyond, the Bay of New York. The building is within a few seconds' reach of both Broad and Wall Streets, the centres of American financing operations. A short distance from the site all the Transatlantic steamers embark and disembark their passengers and cargoes; the Elevated Railroad cars have a terminus on the spot, bringing it into communication with the whole city; and almost all the ferries converge at this point.

The building, which is Renaissance in style, will be 300 feet in length facing Broadway, and 150 feet deep facing Whitehall Street. Its shape will therefore be that of an oblong rectangle; the height will be about 120 feet, exclusive of clock-tower. The materials will be red and white stone, brick, and iron, thus rendering the structure fireproof. The ground-floor, basement, and upper storeys will be let for offices. There will be over one hundred and sixty offices of all sizes, large and small, available for letting purposes, most of which are already bespoken; and some idea of the rents paid may be imagined from the fact that already the Maritime Exchange and the Pennsylvania Railroad Company have engaged two corner rooms for a long term of years at rents of 9,000*dols.* and 12,000*dols.* respectively. On the first storey will be the great Exchange Hall, the finest room in America, the floor of which will measure 30,000 square feet. On the next floor the committee-rooms, library, reading-rooms, managers' and staff offices will be situated. All will be reached by wide staircases and a number of elevators. Most elaborate measures have been taken for providing every part of the premises with heat and ventilation. The estimated cost of the entire scheme will be between 3,000,000*dols.* and 4,000,000*dols.*; the Exchange has about one-half of this amount already to its credit, and bonds will be issued on the security of the premises, the rents and subscriptions for the other half.

It is roughly estimated by the Committee of Management that the rents of the offices and basements will produce an annual income of about 150,000*dols.*, which can be all applied to the liquidation of the building debt, if necessary. This estimate was made before any one imagined the possibility of such rents being offered for the larger offices as those to which we have referred; and, as the advantages and the value of offices in the building become more thoroughly appreciated, it is almost certain that fancy figures will be offered for the rooms on the more important corridors.

The facilities provided for the speedy transaction of business will be as perfect as it is possible for enterprise and science to make them. There will be a spacious telegraph office on the premises, where members can wire or cable messages to their correspondents all over the world and await the reply, which will be available in a few minutes—thus completely annihilating space, and practically bringing the world within the walls of the Exchange for the convenience of its members. There will also be a telephone exchange, by which the members can constantly communicate with their offices and homes, or from the latter with their agents on 'Change. The commercial library will also be a most important feature, as it will contain a complete library of volumes connected with trade and commerce, and members can in a few moments ascertain any information they require as to commercial statistics, reports, or Acts of Congress. In fact, nothing that money or foresight could provide for the accommodation or convenience of members has been omitted.

Messrs. Walter Macfarlane & Co., Saracen Foundry, Glasgow, have been awarded the highest class gold medal for their exhibits, embracing architectural, sanitary, and engineering art castings at the Calcutta Exhibition.



## NOTES AND COMMENTS.

THE tercentenary of the University of Edinburgh, which is to be celebrated in the course of a few weeks, will bring honours to two painters. SIR FREDERICK LEIGHTON and SIR W. FETTES DOUGLAS are to have the degree of D.C.L. conferred upon them. There are to be sixty-seven other doctors created in April. On such an occasion when so many branches of science and literature and so many nationalities are recognised, it is remarkable that no architect's name appears among the proposed honorary graduates. The University authorities would hardly say that in Scotland there is no architect who in utility can be compared with a Dutch lawyer or a fashionable physician from London. A more catholic spirit should have inspired those who framed the programme, and architecture and sculpture, as well as music and painting, should have their representatives in the United Presbyterian Hall.

THE judgment of the Master of the Rolls in the interminable case *BELT v. LAWES* is not likely to commend itself to the minds of artists. For, if we understand it aright, the meaning is that a work of art is like work described as manufactured, and that it would be absurd for a purchaser in either case to trouble himself with inquiring into how the work was produced, and how many hands were employed. That, we suppose, is the correct interpretation of the law, but it does not tally with people's notions of right and wrong. A picture is bought because it is supposed to have been painted by the artist whose name is upon it. An assistant might produce one as good, but the world does not think so, and it is the world's valuation, not the Court's, which is paramount in such cases. The judgment of the Master of the Rolls will not improve the position of artists, and architects especially will suffer. It was open to anyone to call himself an architect, although he had not received professional training, but henceforth it will be dangerous to say of a man of that class that he receives an undue amount of help. The Master of the Rolls may have said to himself, it is impossible to fix a limit to a "devil's" duties among barristers, and why should not artists be also allowed unlimited aid?

THE CHANCELLOR OF THE EXCHEQUER has not approved of the scheme by which it was proposed that the conservation of Westminster Abbey and the Cathedrals should be undertaken by a Government Department. As generally happens with proposals, there is much to be said in favour of governmental control of those buildings, and much also against it. The Abbey and Cathedrals are national property, and it is unwise to allow them to depend for safety upon chance donations. An appeal was lately made in Dublin for assistance towards the expense of constructing drains at St. Patrick's Cathedral, and the response was a few pence. There is more liberality in England, but it may be said that money might be well laid out on every one of the cathedrals, if it could be obtained. Some people would say that the official builders would not be restrained by reverential ideas, but it must be said that of late years what has been done by the Office of Works does not in any way recall the deeds of JEFFREY WYATT.

THE two French battle painters, M. DETAILLE and M. DE NEUVILLE, will have pictures at the next salon of scenes in the Franco-German war. M. DETAILLE's canvas will be about nineteen feet long, and represents the field of Rézonville, on the evening after the battle. It will contain portraits of officers and men who took part in the victory, and every one who remembers the artist's picture of the *Distribution of the Standards* will acknowledge that M. DETAILLE has a happy knack of catching a likeness. M. DE NEUVILLE's work shows M. CARAYON LATOUR at the head of the Mobiles advancing to attack the Prussian lines. The French artists are doing their best to overcome the cynical apathy with which the war was at one time regarded in France.

THE new Museum of Classical Art and Archæology at Cambridge will, it is expected, be opened during the present term. But money is still needed to obtain an adequate library of books, and to provide in part for the expenses of transporting and arranging the casts and models. Professor SIDNEY COLVIN has therefore appealed to members of the University for aid, and upwards of 600% has been already raised.

THE case of *FRAZER & Co. v. EHRENSPERGER & ECKENSTEIN*, to which attention was lately called, is likely to interfere with the even tenour of the arbitrator's duties. As there must be two parties visible in a fencing match, so plaintiff and defendant must appear before an arbitrator, or his office is fruitless. Apparently it does not matter what kind of agreement may have been entered into when the contract was signed, since either party can revoke their share in the appointment of the arbitrator, and leave him without *locus standi*. It will be difficult to say how far this view of the law will affect disputes over building contracts, which have given rise to an immense number of arbitrations. According to the Master of the Rolls, the arbitrator is the mandatory of both parties, and his mandate can be drawn and revoked before it is completely executed. It would, therefore, seem that an arbitration might be upset in the course of the sittings. The only remedy for this anomalous power of conferring and revoking, is "some clear legislative enactment," and if economy and expedition in law proceedings are of any importance in the eyes of Parliament, the enactment cannot too soon appear among the statutes.

THE Council of the Cambridge Antiquarian Society are desirous to undertake the publication of a catalogue of the pictures, chiefly portraits, belonging to the University of Cambridge and the colleges, which should embody all the information attainable respecting the history of each picture. In many cases, however, this information is extremely defective. The correct names, both of persons and of artists, have been forgotten, or replaced by wrong ones, while several portraits preserved in different places profess to represent the same person, or to have been painted by the same artist, on evidence which is either manifestly erroneous or wholly insufficient. The council have come to the conclusion that the correct way to throw light upon these difficult questions would be to place side by side the pictures supposed to have been painted in a given period, and then to submit them to critical examination. They propose to begin with the pictures believed to have been painted before 1600 or 1650. Should the number belonging to the former period prove smaller than they believe it to be, and afterwards should the exhibition prove successful, they will proceed with the pictures belonging to later periods. It is manifest that those who possess these works will decline to lend them without a guarantee for their safe custody and proper exhibition in a building where they could be well seen and easily studied. It is suggested that no building is so well suited as the Fitzwilliam Museum. It is proposed that the pictures should be hung on screens in one or more of the principal rooms of the museum for a period of a month or six weeks during the Eastern term, the council of the Antiquarian Society to defray all expenses. The Museum Syndicate have approved of the scheme. All the arrangements are to be subject to the approval of the Syndicate.

It is well known that the late MR. BLANCHARD JERROLD had in hand a biography of his friend GUSTAVE DORÉ. It appears that a few months ago he came over to Paris with the object of adding to his materials, and applied to M. PAUL DALLOZ, the publisher and an intimate friend of the artist, who cheerfully supplied him with ample data. It is to be hoped that the materials collected may not all be lost through MR. BLANCHARD'S death.

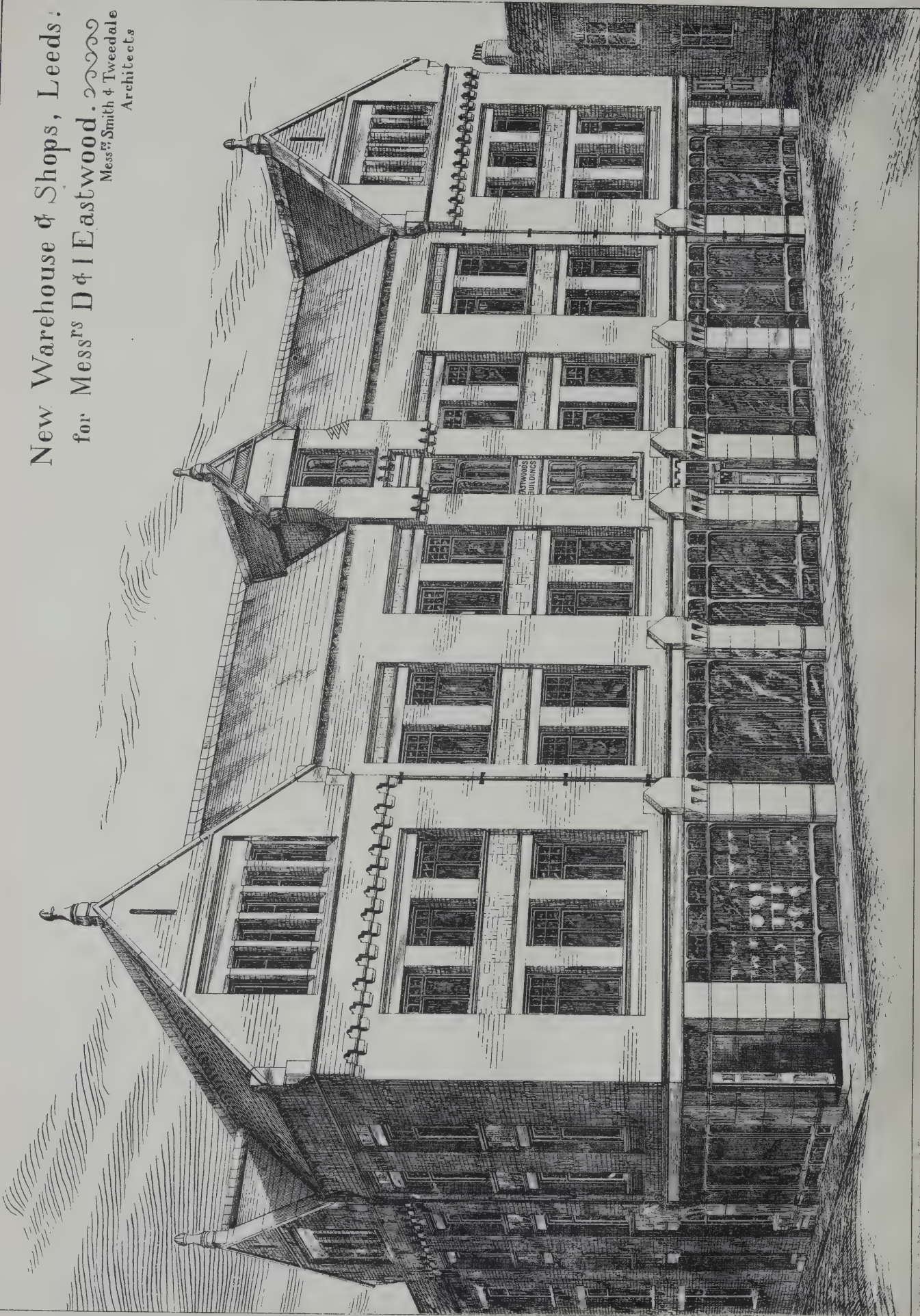
THE publication of hand-books in connection with the Fisheries Exhibition was so successful, the experiment is to be again tried with the forthcoming Health Exhibition. Among the hand-books announced are the following:—"Measurements of Men," by Mr. Francis Galton; "A Manual of Heating," by Captain Douglas Galton; "Healthy Bedrooms and Nurseries," by Mrs. Gladstone; "The Dwellings of the Poor," by Miss Octavia Hill; "Healthy Villages," by Dr. Acland; "Principles of Cookery," by Mr. Septimus Berdmore; "Dress in Relation to Health and Climate," by Mr. E. W. Godwin; "Athletics," Part I., by Rev. E. Warre; Part II., by Hon. E. Lyttelton and Mr. Gerard F. Cobb; "Alcoholic Drinks," by Dr. Thudichum; "Non-Alcoholic Drinks," by Dr. Atfield; "Scavenging and Other Such Work in Large Cities," by Mr. W. Booth Scott; "Fire Brigades," by Captain Shaw; "Healthy Town Houses and Country Houses," by Mr. Eassie and Mr. Rogers Field; "Fruits of all Countries," by Mr. Thiselton Dyer.







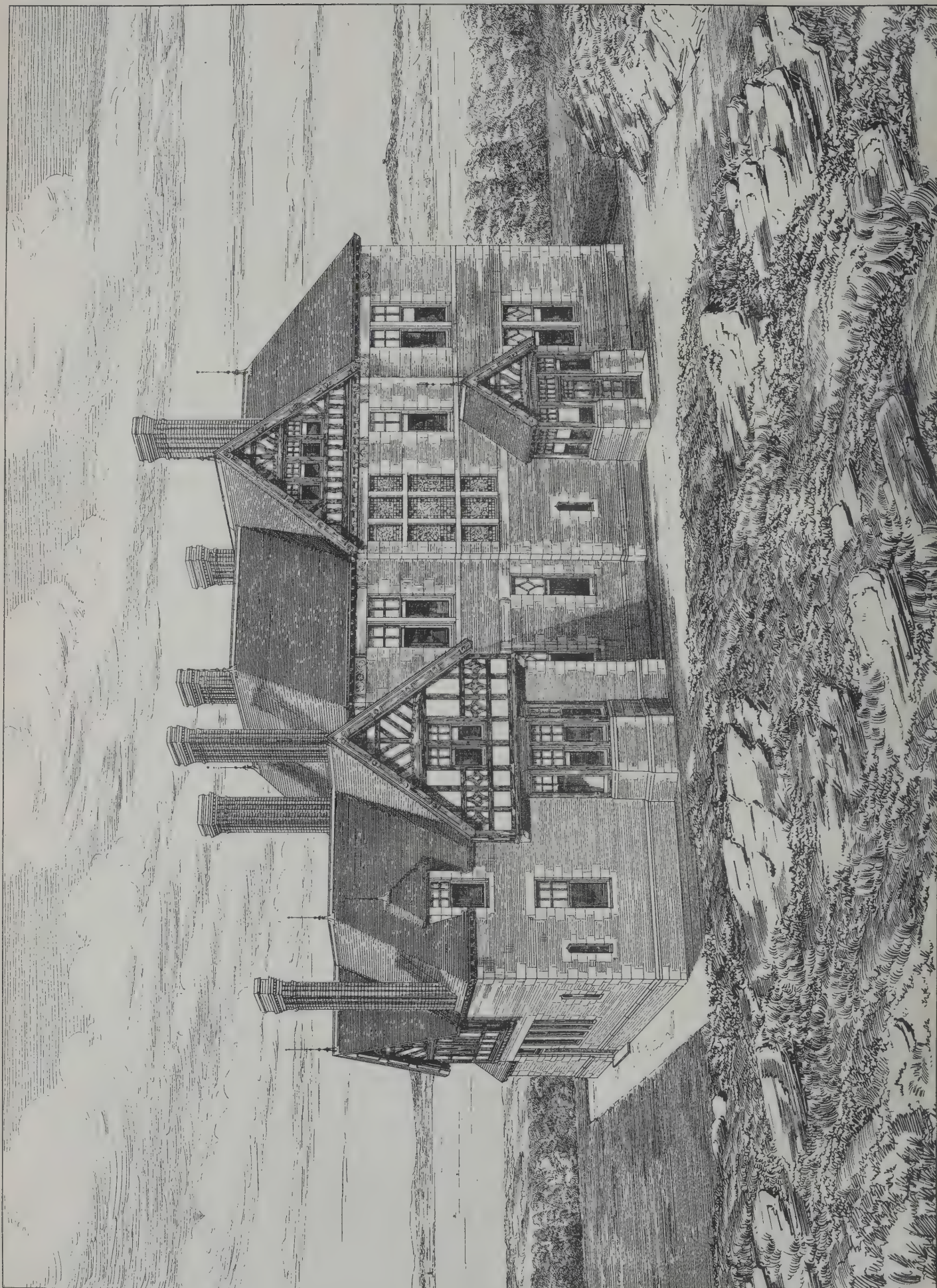
New Warehouse & Shops, Leeds.  
for Messrs D & I Eastwood.  
Messrs Smith & Tweedale  
Architects.











THE BUGHTIES, BROUGHTY FERRY.

THE PROPERTY OF W.H. FERGUSON ESQ.

J. MURRAY ROBERTSON, ARCHT.











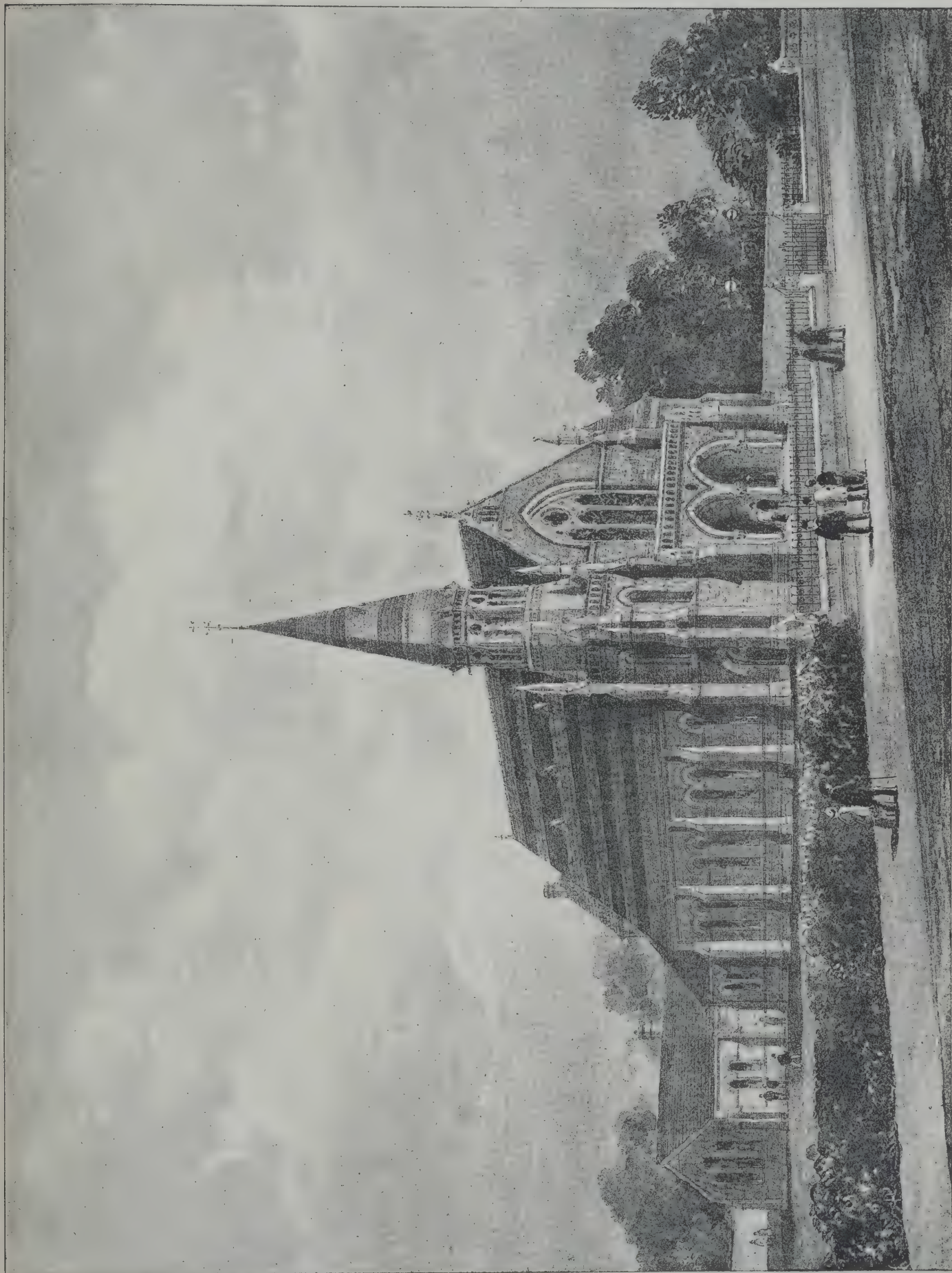


BANCIS & PHILEMON.  
WALL PAINTING AT WYFOLD COURT.  
BY W.E.F. BRITTEN.









INK PHOTO SPRACUE & CO. LONDON.

WESLEYAN CHAPEL, NEW ROAD, BROMSGROVE.

F. S. YATES, ARCHITECT

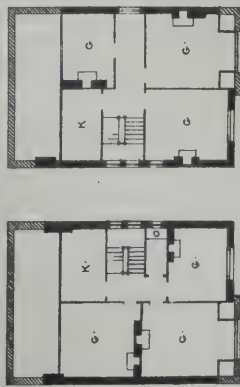






PLANS.

SCALE OF 1" = 10' 0"



SECOND FLOOR.



FIRST FLOOR.



GROUND FLOOR.

- READING ROOM.
- STUDY.
- KITCHEN.
- SCULLERY.
- PANTRY.
- DINING ROOM.
- DRESSING ROOM.
- BATH ROOM.
- ROBBER.

View of Houses.  
Lower Addiscombe Rd. Croydon.  
Geo. Frisch, ARCHA. ARCHT.







## ILLUSTRATIONS.

BAUCIS AND PHILEMON.

WE give this week an illustration from one of the wall paintings at Wyfold Court, which represent some of the old Greek legends. The late Mr. HERMON, who gave the commission for the works, was a connoisseur whose discernment was almost infallible, and the immense prices realised by his collection of pictures was the best evidence of his sagacity. To be selected by such a man for the adornment of Wyfold Court is enough to mark the position attained by Mr. BRITTEN in decorative art. It will be seen from the illustration that the story has been depicted in a manner which is as much unlike that of the painter of an easel picture as that of the book illustrator. The figures and scenery have been kept flat, and are as low in colour as if the eye was only to glide over them. But while the subsidiary character of decoration is accepted with frankness, the artist has, in the painting, expressed the contention of the "fretful elements," what SHAKESPEARE calls "the to-and-fro conflicting wind and rain," in a most vigorous style. Landscape and figures are combined so as to produce effect in a way that is neither conventional nor commonplace. It is hard to say which is the more important, the pitiless storm or the two gods who have exposed themselves to its fury. Rags and drenching rain have not been able to destroy the dignity of JUPITER, while MERCURY, as becomes so practised an actor, appears to be more chilled than he is in reality. A decorative artist cannot restrict himself to one style, and the Wyfold Court pictures are very different in character from some other works which have been executed by Mr. BRITTEN. One of his latest—a frieze in a morning room in Lord LECONFIELD'S house in Mayfair, of which Mr. AITCHISON is architect—has for its subject the gambols of boys and dolphins. Notwithstanding the number of the figures and the length of the work, there is no monotony. Every action is infantile, a quality which does not always characterise some Continental works which have gained renown. Decorative art is not as yet appreciated in England as fully as it is abroad. A painter who devotes himself to that class of work must think of something more than financial profit, and is therefore entitled to the good wishes of all lovers of art.

The story which forms the subject of the painting relates to one of the adventures of JUPITER and his attendant MERCURY. OVID derived it from Greece, and something corresponding with it is found among the most ancient legends. The following extract from Mr. A. S. MURRAY'S "Mythology" will explain the illustration:—

Philemon and Baucis, an aged couple of the poorer class, lived peacefully, and full of piety towards the gods, in their cottage in Phrygia. Zeus, who often in disguise visited the earth to inquire into the behaviour of men, paid a visit, in passing through Phrygia on such a journey, to these poor people. He was received by them very kindly as a weary traveller, which he pretended to be. Bidding him welcome to the house, they set about preparing for their guest (who was accompanied by Hermes) as excellent a meal as they could afford, and for this purpose were about to kill the only goose they had left, when Zeus interfered. He was touched by their kindness and genuine piety, and that all the more because he had observed among the other inhabitants of the district nothing but cruelty of disposition and a habit of reproaching and despising the gods. To punish this conduct, he determined to visit the country with a destroying flood, but to save from it Philemon and Baucis, the good aged couple, and to reward them in a striking manner. To this end he revealed himself to them before opening the gates of the great flood, transformed their poor cottage on the hill into a splendid temple, installed the aged pair as his priest and priestess, and granted their prayer that they might both die together. When after many years death overtook them, they were changed into two trees, that grew side by side in the neighbourhood—an oak and a linden.

THE BUGHTIES, BROUGHTY FERRY.

THIS house, which has just been erected by Mr. W. H. FERGUSSON, stands on the hill called the Bughties (from which the house gets its name), to the east of Broughty Ferry. It commands a magnificent sea view, and of the mouth of the Tay and of Fifeshire.

The rubble and dressings are of red Camperdown stone, and the chimneys of red pressed bricks. The roofs are covered with brown tiles supplied by Mr. DOUGHTY, Ironbridge.

The building has been designed and carried out under the superintendence of Mr. J. MURRAY ROBERTSON, architect, Dundee.

EASTWOOD'S BUILDINGS, PARK LANE, LEEDS.

IN designing these buildings, the desire of the architects has been to gain a picturesque effect with simple and inexpensive means. With the exception of the piers between the shop windows, the heads and sills of the upper windows and the coping of the gables, both the fronts are carried out in red pressed bricks, some specially moulded to the details furnished by the architects being used for the strings, corbelling, &c. The upper storeys are planned for warehouse purposes, and are used for such.

HOUSES IN THE LOWER ADDISCOMBE ROAD, CROYDON.

THESE houses stand on a corner site in the main road of Addiscombe. Plans being given, no reference to the accommodation is necessary. Red bricks with cut and rubbed dressings have been used throughout, half-timber work being introduced in the gables and dormers. The work has been carefully carried out by Mr. WILLIAM MARRIAGE, contractor, of the Oval, Croydon, from designs by Mr. GEORGE FRISCH, A.R.I.B.A., 64 Cannon Street, E.C.

WESLEYAN CHAPEL, NEW ROAD, BROMSGROVE.

THIS illustration represents a view of the above church, now nearly completed, and to be opened on March 26. It occupies a commanding site on the New Road near the main entrance into the town of Bromsgrove, and undoubtedly forms an effective architectural ornament to the locality. The style adopted is sufficiently described by the illustration. The walls are brick relieved by Bath, Gressall, and local stone dressings and brick mouldings.

The main building comprises the chapel proper, providing an accommodation on floor and gallery of 450 sittings. In front are commodious lobbies containing gallery stairs, and at rear are the minister's and stewards' vestries, with passages leading through a covered way to school-room at back of site, which is constructed to accommodate (with class-rooms) 300 children.

The total cost (inclusive of site) is about 3,000*l.*, and the works have been creditably carried out by Mr. JOSEPH TILT, contractor, Birmingham Road, Bromsgrove. The internal fittings are by Mr. SAMUEL MEAD, church and school furniture manufacturer, Sparkbrook, Birmingham. The architect is Mr. F. J. YATES, of 1 Colmore Chambers, Newhall Street, Birmingham.

## EX PARTE ARBITRATIONS.

AT the desire of some correspondents we print the judgments of the Master of the Rolls and Lord Justice Bowen, which were referred to in Mr. Appleton's letter, published on the 8th inst. The case before the Court of Appeal was *Fraser & Co. v. Ehrensperger and Another*, and although it did not relate to building, the judgment is applicable to arbitrations in which architects are concerned. It appears that a contract had been entered into between the parties for the delivery of a cargo of rice. As the cargo was not shipped, the plaintiffs demanded an arbitration, to ascertain the amount of damages. There was a clause in the contract-deed, by which a dispute was to be referred for settlement to the arbitration of two London brokers or their umpire, one nominated by the sellers, and the other by the buyers, each party having the right of rejecting one nominee. Messrs. Ehrensperger disputed their liability on the grounds that they signed merely as agents, and that the sale was conditional on the arrival of the cargo. They proposed to state a special case to obtain the opinion of the Court. This proposal was declined. The plaintiffs gave notice that they had appointed an arbitrator, and that if the defendants failed to appoint another, the arbitrator named by Messrs. Fraser would proceed alone under section 13 of the Common Law Procedure Act, 1854. Immediately afterwards Messrs. Ehrensperger gave notice to the plaintiffs that they revoked, annulled, and made void the power and authority which had been given under the agreement to the arbitrators, and that they discharged and prohibited the arbitrator named from making any award or from any further proceeding in the intended arbitration. A corresponding notice was sent by them to the arbitrator. A second notice was served by the plaintiffs on the defendants stating that the nominee would act as sole arbitrator, and the next day the arbitrator was reminded by



the defendants of the previous notice, and the prohibition was repeated. The arbitrator proceeded with the reference *ex parte*, and awarded the plaintiffs damages amounting to 1,239*l*. The submission was afterwards made a rule of court, and application was made to enforce the award.

The case came before the Queen's Bench Division, and the application was refused, but without costs. The Court held that Messrs. Ehrensperger & Co. had the right to revoke the authority of the arbitrator. That authority was derived from the agreement of both parties, and was accordingly revocable at the option of either. It was held that the Common Law Procedure Act, 1854, was not intended to extend the operation of 3 & 4 Will. 4, c. 42, s. 39, or to take away the common-law right to revoke the appointment of an arbitrator in a case not within the provisions of the latter statute. The plaintiffs appealed; but it will be seen from the judgments given below that the Court of Appeal took the same view as the Queen's Bench Division.

The Master of the Rolls said: In this case a dispute arose between the two parties to a contract. That contract contained a clause providing for an arbitration under the Common Law Procedure Act, 1854, in case such a dispute should arise.

Section 13 of that Act is the section which applies to this case, and that section provides that when the reference is to two arbitrators, as was the case here, if, on such a reference, one party fail to appoint an arbitrator—and that is what happened in this case—the party who has appointed an arbitrator may give the other party notice, and may then appoint the arbitrator to act as sole arbitrator in the reference. This was done in this case, and the sole arbitrator heard the evidence; but before he made his award, the defendant, who had failed to appoint an arbitrator, revoked the authority of the sole arbitrator, and gave him notice not to proceed with the reference. The arbitrator, however, did proceed, and made what he intended to be an award, and it is this award which the Court is now asked to enforce. The question is, whether such an award is an award in law, for if the submission was legally revoked, then there is no award which the Court can enforce.

It was urged on behalf of the appellants that as section 13 of the Common Law Procedure Act, 1854, enables one party to a dispute to name a sole arbitrator, therefore the party so nominated is not the mandatory of both parties, but only of the one who nominates him, and that the person so named is in fact a judge and not an arbitrator, that the matter brought before him is brought for judicial decision, that what is given is a judgment, and that the authority of this judge cannot be revoked. I cannot think that this argument ought to prevail. Judges are well known persons, with well known characters and positions; they are nominated in the authorised way to act as judges between all suitors; they are not persons nominated to decide matters between two particular persons or sets of persons. An arbitrator, however, is a person who is appointed by agreement to settle matters in dispute between two specified parties; an arbitrator is clearly not a judge, and he is, on the contrary, a mandatory, his authority issuing entirely from those persons who agree to give that authority to him. It has not been denied that if each of two parties appoints an arbitrator, either of them can withdraw the mandate from his own arbitrator; but it is argued that in a case such as the present the provisions of the Common Law Procedure Act, 1854, s. 13, alter the law. That must depend upon the question whether an arbitrator appointed under that Act is an arbitrator having the attributes of an arbitrator, or whether he is something else, and whether or not he is subject to the usual incidents which attach to an arbitrator. I am of opinion that he is an arbitrator appointed to act between the parties in the manner in which any other arbitrator would act. The Common Law Procedure Act, 1854, only interferes with the manner of his nomination, and therefore his authority may be revoked; and he is, I think, a statutory mandatory appointed by statute to act for both parties, and therefore either can revoke his authority within the proper time. It has been said that the judgment of Lord Chief Justice Bovill in *In re Rouse and Meier* is correct, and that the reasoning of that judgment supports the case of the appellants, and it is said that section 7 of the Common Law Procedure Act, 1854, incorporates the provisions of section 39 of 3 and 4 Will. 4, c. 42, in such a way that neither party can revoke the authority of the arbitrator. Without doubt the appellants must succeed if the view taken by Lord Chief Justice Bovill be correct. We can, it is truly said, review the judgment of the Court in *In re Rouse and Meier*; but I own that, even if I dissented from the judgment of the Court in that case, I should hesitate to overrule it. That judgment contains a decision on a rule of procedure which was brought thus before the public, the profession, and the Legislature several years ago; it has been acted on, the subject has been dealt with in statutes and rules of Court, and yet the rule has not been altered or abrogated. I maintain, however, the opinion which I expressed in that case, and I think that section 7 applies only to what the arbitrator can do and what the Court can do, and not to what the parties may do, and that it does not incorporate into the Act the enactments of the earlier statute affecting the power of the parties to revoke the arbitrator's authority. It has been further urged that section 13 of the Act of 1854 prevents the parties from revoking the authority of

the arbitrator; but I adopt the reasoning of the decision in *In re Rouse and Meier*, and I think that it is an incident which is affixed to the appointment of an arbitrator that he is a mandatory, and that where he is appointed to act between two parties he is the mandatory of both: so that before the mandate is completely executed it can be withdrawn and revoked, unless there is some clear legislative enactment which takes this power away from those who confer the authority on the arbitrator. I find no such words in section 13 of the Common Law Procedure Act, 1854, and I am, therefore, of opinion that that section does not take the power away. I think that the cases referred to support this view, which is that adopted in the judgment of the Divisional Court, and this seems to be especially true of the judgment of the late Master of the Rolls in *Piercy v. Young*.

Lord Justice Bowen said: I am of the same opinion, and I agree that this appeal must fail. At common law the case is clear, and I think that an arbitrator appointed under the Common Law Procedure Act, 1854, has not a statutory and indefeasible function to bind both parties by his award, if either of them revokes the authority in time. Section 13 does not give him this, although it makes him in certain circumstances the mandatory of both parties. Nor does the latter part of the section alter his position; that provision enables a party to go to the Court in certain circumstances without attempting to revoke the submission. The judgment of the Court in *In re Rouse and Meier* shows that the provisions of section 39 of 3 & 4 Will. 4, c. 42, do not govern such a case as this.

### THE BELT CASE.

ON Monday last judgment in the case *Belt v. Lawes* was delivered in the Court of Appeal by the Master of the Rolls, Lord Justice Baggallay, and Lord Justice Lindley. Their Lordships were unanimous in favour of the plaintiff, and were of opinion that the damages given by the jury at the trial, amounting to 5,000*l*., with all the costs, should not be disturbed. The following remarks of the Master of the Rolls on the relation between an artist and his assistants merit attention:—The libel attacks the plaintiff in his character of a professional sculptor. It was admitted that it accuses him of mean, dishonourable, and dishonest conduct as a professional sculptor, and I think of such conduct habitually and up to the time of the accusation. By what standard is the truth of those accusations to be tried? I answer by the standard which the majority of careful, simple, honest-minded men of ordinary intelligence and ordinary sensitiveness of right and wrong will apply. Such accusations are not to be determined by the sensitive delicacy of a high-minded profession, which is often too sensitive. It is not to be determined by a puritanism of honour, which belongs sometimes to minds of the highest order. It is to be decided by the ordinary standard of honour of ordinary honourable men. If that be so, I know of no tribunal, I will not say superior, I will say equal to an honest jury of twelve men of something like the social quality of the accuser and the accused. The mind of a single man may be too high-pitched, the minds of men of a different class might be too low-pitched; but the concurrent opinion of a jury reasonably and fairly selected is probably safe. What we have now to see is what view such a tribunal might not unreasonably take of this case. The charge is that the plaintiff had made use of assistance in sculpture, more especially in cases where he has sent in models by way of competition with other sculptors for an order for works, to an extent and in a manner which was mean, dishonourable, and dishonest. It is necessary to bring one's mind clearly to the conception of what men of ordinary honourable feelings might consider a kind of, or an amount of, assistance which would be mean, or dishonourable, or dishonest respectively. 1. With regard to whom or to what would the assistance, however great, of skilled helpers paid for their skill be dishonest in the case of such a person as the plaintiff. It is not dishonest towards the persons employed and paid. It makes no difference to the purchasers—none to competing artists. It is difficult to see whom it cheats or defrauds, or in what respect it is an injurious fraud. Is one then bound to say it is dishonest? 2. Would the use of more assistance than other sculptors usually accept be of itself mean or dishonourable? I say certainly not if it were used with an innocent mind. I abhor the idea of stigmatising a man as mean or dishonourable unless he has a mean or dishonourable mind. If there was too much assistance—if more than usual assistance, whether at the beginning or end of the sculpture, is accepted or hired, though such assistance be a breach of professional etiquette, I am of opinion that men of ordinary honour might refuse to consider such conduct to be either mean or dishonourable in the sense of this libel, if it were only the result of ignorance, or idleness, or negligence, or even of a wilful disregard of mere professional regulations. Men of ordinary honourable feelings might refuse to class the suggested conduct as mean or dishonourable unless the person accused adopted the suggested conduct from a mean motive, or with a dishonourable intention, or pursued such conduct in an intentionally mean, degrading, and deceptive manner. If,



therefore, it can be said that the defendant proved by evidence, which ought to be conclusive that the plaintiff had accepted more than usual assistance, or more assistance than professional artists usually accept, or more than is understood to be allowed by the regulations of his profession, it seems to me that a reasonable jury might refuse to find such conduct to be either mean or dishonourable, unless the plaintiff had further proved by evidence which ought to be conclusive that the plaintiff accepted such assistance from a mean motive, or with a dishonourable intention, or used such assistance in an intentionally mean, degrading, and deceptive manner. And I take it that it is in the latter sense that the defendant has accused the plaintiff, both in the libel and in the evidence brought forward to prove the justification. If the evidence ought to be considered to have conclusively proved that the plaintiff did habitually allow Verheyden to design and execute the sculpture for which the plaintiff took credit as his own, and at the same time, in order to obtain personal fame, which he felt he did not deserve, hid Verheyden in the ludicrous manner which Verheyden describes, I cannot hesitate to say that his acts were mean and dishonourable, because his mind would be mean and dishonourable, and the jury ought to have said so. But if the evidence failed conclusively to prove this, even although it was proved conclusively that the plaintiff accepted more assistance than is recognised as legitimate in his profession, yet as it has failed to prove that he did so meanly or dishonourably, then the verdict cannot be set aside as against the weight of the evidence. It was urged on behalf of the defendant that our consideration ought to be confined to the question whether the plaintiff could design and execute works of artistic merit, and that we ought not to consider the question whether he could or could not perform some part of the work of a sculptor. In one sense that is so, as the counsel for the plaintiff at the trial declined to accept a verdict that he could do some work, but that he could do no artistic work, and that he knew he could not, and that by mean and unworthy expedients he endeavoured to conceal his deficiency. Of course he did; but in order to induce the jury to come to the conclusion that the plaintiff could do no work of artistic merit, and that he knew he could not, and therefore endeavoured to conceal his deficiency, the libel alleged, and the witnesses for the defendant intended to prove, that the plaintiff could not do any substantial part of the work of a sculptor-artist. And though the plaintiff would not willingly accept a verdict that he could only do some part of the work of an accomplished sculptor, the jury were entitled, and the Court is now bound, in weighing the amount of credit to be given to conflicting evidence, to consider that some of the defendant's witnesses intended to discredit the plaintiff to the fullest extent. If Verheyden, for instance, intended to swear that the plaintiff could not perform even the rudest part of a bust, and the plaintiff proved to the eyes of the jury that he could, the jury were entitled to consider whether Verheyden could be a truthful witness when he denied to the plaintiff the power of finishing a valuable bust.

#### EDINBURGH ARCHITECTURAL ASSOCIATION.

A meeting of the Association was held in the Professional Hall on the 10th inst., the President, Mr. David MacGibbon, in the chair. After some preliminary business had been disposed of, and after several gentlemen had been balloted for and admitted to the membership of the Association, the President called upon Mr. W. W. Macfarlane, who then read a paper, entitled "Some Notes, Thoughts, and Sketches on the Decorative Arts à Pot-pourri," in which he endeavoured to show that good decorative work was not necessarily the outcome of lavish expenditure. Hints were given as to some simple and artistic modes of treating the interiors of town houses. The decorations and furnishings of an ideal bedroom were sketched, and other topics of importance in decorative matter discussed. Mr. Macfarlane thought that a practical demonstration in the use of colours, &c., would be of much more value than essay reading, and expressed his willingness to give this at some future time, provided a subject could be procured, and the necessary daylight. The paper was illustrated by numerous sketches. At the conclusion of the paper a vote of thanks was awarded to Mr. Macfarlane.

#### ARTISANS' DWELLINGS IN GLASGOW.

THE closing meeting of the architectural section of the Glasgow Philosophical Society was held on Monday. Mr. James Sellars, president of the section, occupied the chair. A brief discussion took place on the paper read at a former meeting by Mr. John Dansken, entitled "Notes on the Fire-resisting Properties of the Leading Building Materials." The President delivered the closing address, in the course of which he reviewed the work of the session. Referring to the paper read by Mr. Honeyman on "Free Spaces in Densely-populated Districts, and how to obtain them," he said that it had a direct bearing on the subject which was agitating the country, namely, the dwellings of the poor.

How to supply healthy houses for the class who lived in hovels in the lowest slums was the question which had to be considered now. The Royal Commission which was now engaged inquiring into the subject would, he trusted, be able to throw some light on it. He understood it had been suggested to the Commission by a well-known authority in Glasgow that among the first things they should inquire into were the existing laws or restrictions which prevented the erection of suitable houses for the very poor. There was not the slightest doubt that in Glasgow it would be impossible, under the restrictions sought to be obtained in the new Police Act, to erect houses for the poor at a cost which would permit of them being let for a rent which that class of persons could pay. They must have something like free trade in house building if they were to provide for the very poor. The restrictions, if they existed at all, must be of the most elastic kind, and even then the cost of the ground would be a serious difficulty. Mr. Honeyman, in moving a vote of thanks to the President, said he was extremely glad that Mr. Sellars had taken that opportunity of uttering another protest against unnecessary restrictions which stood in the way of houses for the very poorest classes being erected here and elsewhere. On the motion of Mr. Landless, Mr. Sellars was re-elected president. The proceedings were afterwards brought to a close.

#### THE DESIGNS ON COINAGE.

THE first of a series of Cantor lectures was given on Monday at the Society of Arts by Professor Chandler Roberts, of the Royal Mint. In the course of it the methods adopted by the Greeks in striking coins and the casting of coins as conducted in late Roman times were indicated, while more recent plans were illustrated by cutting discs of metal, by means of an appliance formerly used in the Mint in the Tower of London, and by striking them by a press devised in the Paris Mint early in the present century. Professor Roberts said it had often been contended that art had suffered serious loss by the replacement of old hand-struck money by coins struck by machinery. It was, therefore, not a little remarkable that the artists who were connected with mints appear to have been the very people to insist on the introduction of mechanical improvements. For instance—to take only the comparatively well-known names from those mentioned—Benvenuto Cellini described, in 1586, the screw press which, in a form modified to enable it to be worked by steam-power, has only just been abandoned in the Mint in this country. Leonardo da Vinci, as Dr. Richter has recently shown, devised in 1515, for use in the Mint at Rome, a method of cutting out discs of metal for coinage, which was a great advance on the crude methods employed in the sixteenth century. Briot, Engraver-General of the Paris Mint, invented a machine, used in this country in the reign of Charles I., which depends upon a principle definitely adopted in the new lever-coining presses now at work; and his pupil, Simon, the best engraver England ever had, employed an elaborate mechanical contrivance, which enabled him to produce one of the most beautiful coins known. In order to meet the objection that the artistic side of minting was hardly within the province of the chemist, Professor Roberts quoted Biringuccio, one of the greatest of the early metallurgists, whose advice to the Mint Master, written in 1540, might be briefly stated as follows:—"If the coins are very accurate as regards 'standards of fineness,' but small profits can be made; while, if too much base metal is introduced, the execrations of the people will follow; but especial care should be devoted to the preparation of the dies for striking artistic coins, so as to give the people pleasure in things they are obliged to use."

#### THE STONE CIRCLES AT STANTON DREW.

AT the last meeting for the session of the Bath Natural History and Antiquarian Field Club, Mr. Allon Tucker read a paper on "Stanton Drew." Prefacing his paper by remarking that so much had been written on the subject that there was little room for originality, he, in the first place, touched on the meaning of the word Stanton, of which there were many examples in the manor of Keynsham, and then of the other word Drew, which of course had no reference to the so-called Druids, but was of quite a different origin. He then gave a description of the stone circles, and the various other stones scattered about—their position, size, and composition—and concluded by bringing in review the various suggestions of the purposes for which they were erected.

Mr. Dymond, who had written papers for the Proceedings of the Somerset Archaeological Society and the Archaeological Association on these circles, and was called on by the chairman, the Rev. Canon Ellacombe, to give his views as one well versed in the subject, said that he quite corroborated Mr. Tucker's view that the Cove had never been a Dolmen, and that the third stone now fallen could never have been a top covering stone. He considered that very little change had occurred in the position of the stones since Aubrey's time, and that he had, with Mr. Perfect, accounted



for all of them, making a total of sixty-six in number. As to the purposes for which they were placed, he thought that in addition to an original religious use, they subsequently developed into uses judicial as well as funereal.

The Rev. H. H. Winwood having been called on by the chairman, said that he congratulated the club that one of their younger members had given so careful and judicious a paper, merely stating the plain facts of the case without launching out into any fanciful theories. With regard, however, to one point he must demur. Mr. Tucker had spoken of one of the stones being "limestone," and having a "shell" in it. Now he thought it would be safer to say that they were all a conglomerate. He had never seen any one of the stones there that could be called a "limestone," and as to the shell he challenged Mr. Tucker to show him one. They probably came from the neighbourhood, and were a peculiar form of the conglomerate which fringed our Mendips. At the same time, it was an object worthy of the members of the club to try and ascertain whence these stones came; they were probably not far off. One other point—as to their future preservation. He stated that during a recent visit there with General Pitt Rivers, the Government Inspector of Ancient Monuments, arrangements were made for their future security, and they were in the process of being scheduled amongst the other remains in the county worthy of preservation.

The chairman returned the thanks of the club to Mr. Allon Tucker for his paper, and the judicious restraining of his fancy from going into theories. As to the name of Drew being derived from a family of that name, he would mention one fact in corroboration. Drew Steignton, a well-known place in Devonshire, was the same name slightly altered, and records show that a family of the name of Drew, who lived in Exeter, was connected with that place. There was yet another derivation he could venture to give. Drew was the old name for a stream, and the little river Chew ran close alongside. The word was to be found, but somewhat hidden, in the word Derwent. "Stanton," he thought, was connected more with a Roman station than a paved road; the word "Stratton" was more likely to suit the latter idea. The remains nearest allied to this were the standing stones of Stainness (a stony promontory instead of a stone village or town). There was a Maes How near Stainness as there was a Maesbury near Stanton; and moreover there was a single stone corresponding with "de Hauteville's quoit." In conclusion, he ventured upon some theories of his own as to the date being post-Roman, and said his views were held by others whose opinion was of weight in these matters.



#### Design Piracy.

SIR,—A few years back you were good enough to illustrate, in a beautiful photo-lithograph, from a photo, my original design for the Durham Cross, erected at Fence Houses, Durham. In a building journal of recent date I find my design, line for line, detail for detail, published as a memorial cross to Lord Frederick Cavendish, by Messrs. Lockwood & Mawson, architects, and executed by Messrs. Farmer & Brindley. With distinct purpose my design was a copy of no ancient example. In this Cavendish Cross there is not a distinctive peculiarity of my design which has not been adopted. Possibly the Durham Cross has been reproduced by request, but I am amazed that in ordinary courtesy any architects would permit the reproduction to be stated in all the public prints, the reproduction of another man's design, simply, purely, as their own.

Yours faithfully,  
THOMAS DREW, R.H.A.

#### The Reform of the Institute.

SIR,—The gentlemen who are clamouring for a rival to the Institute do not show the sagacity of their countrymen, a sagacity which has kept England free from many of the troubles that have afflicted other nations.

The Institute has now been in existence nearly fifty years, and till comparatively lately has had but a struggling existence. It is more or less known to the public and to foreign architects, it is beginning to exercise a beneficial influence on public opinion, to be consulted by the Government when it wants to know the opinions of the profession, and it is generally admitted to have raised the position of architects. Is the profession so powerful and independent that it needs no aid? Are its members so wealthy and so highly esteemed that they can always dispense with corporate assistance? My conclusions lie in the opposite direction. It seems to me that all who now stand aloof should enroll themselves in the ranks of the Institute, and thus form a powerful and organised body to act in case of need, and to prevent isolated re-

sistance from being overcome, rather than lessen the little corporate power we have by schism.

If there are grievances they can be clearly stated and temperately argued, and I should think if found to be real must certainly be redressed, for every member who fulfils any duty does it purely for the benefit of his profession; he gets neither pleasure nor profit. Want of space, want of time, and want of funds check many improvements that are needed. Could a lowering of the subscription be afforded, it would doubtless increase the number of the members.

We have no parliamentary representative, so every possible architectural work is given by the Government to a military engineer or to the Board of Works. It would be interesting to know what the percentage on the outlay is at the Board of Works, if the real cost of design and supervision could be known, if we knew the present value of the land on which the offices are built, what the rent and taxes would come to, and what the expenses, salaries, and the like really are. I am told that in India these amount to 200 per cent. in the Public Works Department, *i.e.* that when all works are stopped only one rupee is saved out of three, yet when independent architects are employed by Government, the ordinary starvation pay of 5 per cent. is refused. Were the architects a powerful body these abuses would be stopped.

150 Harley Street, W.: GEORGE AITCHISON.  
March 19, 1884.

#### WORKS IN PROGRESS.

**The Contract for Lifts** for Messrs. Silber & Fleming's new premises, Wood Street, for which Messrs. Ford & Hesketh are the architects, has been placed with Messrs. R. Waygood & Co., Newington Ironworks, Falmouth Road, S.E., who have received instructions to supply one of their patent hydraulic balanced passenger lifts, two direct-acting platform basement hoists, one goods lift, and one hydraulic warehouse crane, all to be worked by water supplied from the General Hydraulic Power Company's high-pressure mains.

**The Brighton Aquarium Concert Hall** has been brilliantly illuminated nightly for the past three months by the "Bower duplex regenerative gas lamps," as fitted by Mr. J. Coley Bromfield, consulting engineer, of 49 Selborne Road, Hove, Brighton. The steadiness and brilliancy of the light has excited the admiration of all who have seen them, whilst the small quantity of gas required to produce such an intense illumination appears to most people incredible. This extraordinary new light will be exhibited nightly at the Building Exhibition.

**Mr. R. Adams**, whose new offices and show-rooms are at 17 Blackman Street, Borough, S.E., has received the order for his patent secure fanlight-opener for the whole number required—which is very large—in the new and extensive office buildings in Burge Yard, Queen Victoria Street, of which Mr. Whichcord is the architect. Mr. Adams's adjustable fanlight-opener, and also his spring hinges, are being extensively used by Messrs. Colls & Son at their new buildings in Fenchurch Avenue, Lime Street, E.C. The fanlights in the latter are large, and, being made of iron, with heavy plate-glass, require an opener, closer, and fastener that is perfectly safe and capable of being worked by clerks and inexperienced persons. For such requirements this opener is pre-eminent, as the screw by which it is worked is not only the neatest arrangement we know of, but is guaranteed against accidents, and does its work easy.

**Mr. Charles D. Phillips**, Emlyn Works, Newport, Mon., has just completed the covering of a large new blast-engine house at the Ebbw Vale Steel, Iron and Coal Company's Works, at Victoria, with his new patent double grip lock-jaw roofing tiles. It is in a particularly bleak situation, and the roof has proved itself to be most effective, ornamental, and economical. Mr. Phillips is also supplying the tiles for covering some roofs for the Right Hon. Earl of Shaftesbury. These tiles are rapidly growing into public favour, and a large quantity of them are continually being used in the neighbourhood of London.

**The Covent Garden Hotel**, Southampton Street, Strand, has been redecorated, Messrs. Rottmann, Strome & Co.'s leather paper being introduced for the wall decorations.

**Messrs. Andrews & Co.'s** improved system of wood-block flooring is being extensively specified for hospitals, churches, schools, and other buildings in various parts of the country. This system possesses an undoubted superiority in having the blocks "keyed" firmly to the cement bed underneath, rendering it an impossibility for them to become loose, and doing away with the hitherto well-founded objection to these floors—the liability of the blocks kicking up. Now that this drawback has been remedied we have no doubt that wood-block floors will be more generally adopted, as they are in every way to be preferred to the ordinary floors, being free from echo and very durable. The blocks used by Messrs. Andrews & Co. are thoroughly seasoned and undergo a chemical process to render them impregnable to dry rot. They are laid so that damp cannot rise from beneath.



## LEGAL.

**Queen's Bench Division.—March 19.**

(Before Mr. JUSTICE HAWKINS.)

FELIX Z. GORDON.

AN EXPENSIVE SIDEBOARD.

The plaintiffs in this case were upholsterers in Charles Street, Soho, and also in Paris. The action was to recover 100*l.*, a balance said to be due as part of the price of a sideboard which the plaintiffs had made for the defendant.

The case for the plaintiffs was that in the spring of 1882 the defendant wanted a sideboard for his dining-room, and desired the plaintiffs to make a sketch from three drawings which he sent them. It was agreed that they should make the piece of furniture for about 130*l.* It was said, however, that there was afterwards some alteration in the design, in respect of which 20*l.* was paid, and especially that the ornaments, which were to have been moulded from carton-pierre, were instead carved in mahogany, and afterwards enamelled to give a sort of ivory surface. It was said also that the enamel could be better applied to the wood than to the other material. This increased the cost of manufacture, and the price that the plaintiffs charged was 230*l.*

The case for the defendant was that the cost was to be 130*l.*, and this sum he had paid, leaving the extra 100*l.* in dispute. It was further said that 130*l.* was enough to compensate the plaintiffs for the work that they had done.

The jury, having considered the matter for half an hour, gave their opinion that the sideboard was worth 155*l.*, and a verdict was entered for the plaintiffs for 25*l.* beyond the 130*l.* which had been paid.

## ART WORKMANSHIP.

**Gloucester.**—A faculty for the reredos to be erected in the St. Catharine's Church, Gloucester, has been granted. The reredos has been designed by Messrs. Medland & Son, of Gloucester, architects of the church. The reredos is in the form of three panels, with canopies, which will be executed in Caen stone. The back of the central panel will be diapered, and beneath the canopy will be a brass cross. In each of the side niches will be the figure of an angel in adoration, and the reredos will be supported on either side by a small stone buttress. Alabaster and small Devonshire marble columns will be used, and the work promises to be very effective. The present vestry of the church is to be taken down, and a new and larger one built, on a plan to allow it hereafter to be used as the base for a spire to the church.

**Whitley.**—The large west windows of Christ Church have recently been filled with painted glass, the cost of which has been defrayed by an anonymous donor. The designing and execution of the work were entrusted to Messrs. Westlake & Co., of Endell Street, London. The subjects of the windows are devoted to the Incarnation, and illustrate the earlier scenes in our Lord's life, together with the types which foreshadow them. There are three rows of figures in each window. In the central and upper rows of the window on the south side there are representations of the Annunciation, the Adoration of the Magi, and in the lower row appear the types predicting this event, the manifestation of Jehovah to Moses at the Burning Bush, and the visit of the Queen of Sheba to Solomon. On the north side the central figure is the Presentation of Christ in the Temple, and above it the Baptism of our Lord. In the lower series the Old Testament types are the presentation of Samuel to Eli, and the passage of the Israelites through the Red Sea. In the tracery there is a representation of the infant Saviour and the Virgin, with angels in adoration. The style of the details of the windows is that which prevailed in the fourteenth century.

## ARCHÆOLOGY.

**The Archæological Survey of India.**—The sixteenth volume of reports of this department has been recently issued from the Government Press at Calcutta. One of the most interesting discoveries recorded on the pages is that of another Asoka pillar at a village on the frontier of Nepal. Although the figure of the lion forming the capital of the monument has been so damaged that only the paw or foot remains, there is sufficient to show that originally it must have been similar to the beautiful lion-pillar still standing at Lauriya. It is not certain for what purpose these pillars were erected; but it seems probable that they may have been raised to mark the high route to Nepal and the Himalaya, or to celebrate some famous march in history. They are all found along the principal road north of Patna. The artistic excellencies of the earlier pillars are far superior to the later ones. It seems more than probable that they were due to the influence and co-operation of Greek art, which completely ceased after the overthrow of the Bactrian dynasty. General Cunningham also gives a brief account of the Kauwa Dol or Crow's Rocking-stone, a ruined

column on the top of a hill which is now proved to cover the site of the famous Silabadhra monastery, visited by Hwen Thsang in the seventh century. The Archæological Survey is still doing the good work commenced by the efforts of individuals like Kirkpatrick and Brian Hodgson.

**The Manor House, Chelsea.**—In making some excavations in ground formerly attached to the Manor House at Chelsea, built by Henry VIII. as a residence for his daughter, the Princess Elizabeth, the workmen came upon probably the only portion existing of a historically-known subterranean communication leading northwards from the three great houses—Manor House, Winchester Palace, and Shrewsbury House—in the direction of Kensington. The great leaden ducts constructed by Henry VIII. to supply Winchester Palace and the King's New Manor House with water, from a conduit built by him in the grounds at Kensington, had already been found, and removed as obstacles to building. Remains of the ancient crucible works for gold refining, and the Chelsea china works, both in close proximity, had also been dug up, but this curious passage was not known to have any existing remains. About 30 feet of it, in good preservation and carefully arched, have now been uncovered.

## CHURCH BUILDING AND RESTORATION.

**Plymouth.**—The Presbyterian church, Wyndham Street, has been reopened after restoration, necessitated by the fire which occurred fifteen months ago. Beneath the chapel, as before, there is a spacious schoolroom, to which five new class-rooms have been added on the east side; and the space formerly occupied by class-rooms at the end has been thrown into the main room. The architect for the restoration was the architect of the original building, Mr. J. L. Hodge, of Courtenay Street, Plymouth; the contractors were Messrs. Palk & Partridge; Mr. Rowe, of Old Town Street, supplied the gas fittings; Messrs. Randle & Prowse, of Courtenay Street, were the painters; and Messrs. Harding & Sons, of Union Street, were the upholsterers.

**South Gosforth.**—The memorial-stone of a Wesleyan chapel has been laid. The plans have been prepared by Mr. J. J. Lish, Newcastle-on-Tyne, for a handsome building with spire and galleries, though the spire and galleries are parts of the project which will not be immediately carried out. The cost of the building, so far as it is this year intended to proceed with it, will be about 3,000*l.*, and for that sum accommodation for 450 persons will be provided.

**Monkswood.**—Monkswood church, Monmouthshire, has been opened. It is built with hammer-dressed local stone, relieved by Westwood ground dressings, and the roofs are covered with silver-grey slates. The style is that of the early part of the fourteenth century, accommodation for 136 worshippers being provided, at a cost of about 1,000*l.* The fabric consists of a nave, 35½ feet by 19½ feet, with double bell-turret at the west end and an open-timbered porch on the south side; a chancel, 22½ feet by 13½ feet, screened off from the nave by a dwarf wall, and having lofty arch, with sub-arch, supported on red Mansfield responds; and vestry, 11 feet by 8 feet, leading from chancel on the north side. The cathedral rolled glazing was supplied by Mr. Ben Gay, of Bristol, the carving by Mr. J. T. Davies, of Brynmawr. The architect was Mr. E. H. Lingen Barker, of Hereford; and the builder, Mr. E. Giles, of Little Mill.

**Market Rasen.**—The safety of the old tower of St. Thomas's Church has lately been a subject of consideration. The upper portion has been found to show signs of rapid decay and imminent danger. On the top several iron ties were found to be loose, and some of the stones might be separated by the hands. In the bell-chamber the mullions and transoms of the windows on the east, west, and north sides are in a dilapidated and dangerous condition. The vicar has considered it advisable to discontinue the "ringing up" of the bells, and to call in some competent person to give an opinion as to the best course to be pursued, and the name of Mr. Kirk, architect, of Sleaford, has been suggested. The fine old tower is from 60 to 70 feet high, is strongly buttressed, and is believed to be about 600 years old. After the tower has been inspected an appeal will be made for pecuniary help.

## SCHOOL BUILDINGS.

**Stoke-upon-Trent.**—A monthly meeting of the School Board was held recently. Mr. Kirkham moved that Mr. Charles Lynam be instructed to prepare plans for the new school and superintend the erection, at a commission of 3 per cent. The Rev. H. C. Turner seconded. Mr. Ford intimated that Mr. Beardmore, architect, would undertake the work at 2½ per cent., and he consequently objected to the payment of 3 per cent. to Mr. Lynam. He proposed that the matter should be adjourned until the next meeting, and the subject then placed upon the agenda. Mr. Walley seconded this amendment. Mr. Minton observed that an architect would probably take the work at even less commission than 2½ per



cent. so as to get a connection with a public body. Mr. Lynam had served the Board well for thirteen years, and at a fair marketable price; and he saw no reason why the Board should change. Mr. Ford said that some of the members were absent from the meeting, and he should object to the appointment being made in a hole-and-corner way. The Chairman said he must protest against this latter remark, seeing that the consideration of the minutes of the Building Committee was mentioned upon the agenda, and the matter was ready for the Board's decision. The amendment was defeated by four votes to three, as was also a further one, moved by the Vice-Chairman, seconded by Mr. Walley, that the services of an architect be advertised for, the original motion being carried.

**Little Hulton.**—An appeal has been issued for support towards the proposed new church schools. There are at present 400 scholars upon the register of Peel School. Plans prepared by Mr. R. K. Freeman have been approved by the Education Department. Arrangements have been made for entering into a contract with Messrs. Coope Bros., of Farnworth, to erect the buildings, offices, &c., for the sum of 2,180*l.* 10*s.* This sum is exclusive of the architect's commission, the cost of furnishing and fitting-up, &c.

**Wolstanton.**—The memorial-stones of new Sunday Schools, to be erected at the rear of the Primitive Methodist Chapel, Wolstanton, have been laid. The schools are designed to accommodate over 300 scholars, and will cost nearly 400*l.* The building contract has been taken by Mr. F. Seabridge.

### NEW BUILDINGS.

**Organ Manufactory, Kendal.**—Messrs. Wilkinson and Sons, of Kendal, are about to erect a large organ manufactory, pianoforte saloons, offices, &c., and residence. The available floor space for business purposes will be over 9,000 feet, and when complete will be one of the largest buildings of this class in the north of England. The design will be Gothic, freely treated; freestone dressings will be used to front elevations, and the works will be entered by a handsome porch with deeply moulded arch and granite columns. The entire frontage of the whole block will be 170 feet, which will face the river Kent, and will form a nice feature in the centre of the town. The plans have been arranged and the designs made by Mr. Eli Cox, architect, of Kendal.

**Hall at Plantation, Glasgow.**—The new hall erected in Cornwall Street, Plantation, by the Plantation U.P. congregation has been completed. The buildings are erected on a piece of ground on the south side of the church, and cover an area of about 400 square yards. The hall is 40 feet by 54 feet, and is ceiled at the collar beam, 25 feet from the floor. Four bound couples carry the roof, which are supported by semicircular and moulded ribs, springing from stone corbels and tied with malleable-iron tie rods and queen-rods. There is an end gallery, seated for 100. On the ground floor of the front building there are two class-rooms, the one 15 feet 6 inches by 21 feet 6 inches, the other 15 feet 6 inches by 10 feet, with kitchen and lavatory accommodation. The second story is devoted entirely to the officer's house, which contains four apartments. The stair to this house, is also used as the stair to the gallery. Jutting out from the main building at the platform end a small side-room has been erected for the accommodation of the speakers and others. The forms are portable and in short lengths, and are convenient to arrange for Sabbath school, mission, concerts, and the various purposes for which the hall has been erected. The entrance lobby to the hall, which is laid with a simple pattern of tiles, is 8 feet wide. The vestibule door and door to the hall are hinged with spring hinges, opening both ways. At night the hall will be lighted by six coronas and wall brackets beneath and over the gallery, and at the sides of the platform. The hall is seated to accommodate 550. The buildings have been erected to the designs and under the personal superintendence of Mr. R. A. Wightman, architect, West Regent Street, Glasgow.

**Westminster Training School and Home for Nurses.**—This institution was founded by Lady Augusta Stanley in 1874, and has occupied No. 8 Broad Sanctuary for some years. After the death of the foundress, it was proposed that it would be a fitting memorial to her to erect a new building suitable for the requirements of the school and home, and, after considerable time, a freehold site in Queen Anne's Gate, Westminster, was obtained, and the new building has been erected at a cost of about 7,800*l.*, exclusive of land. The home is replete with every comfort for the nurses, and contains, in the basement, the usual kitchen offices, with ample store-rooms, box-room, and other conveniences; on the ground floor, a handsome hall and staircase, with a stained glass window, with portraits in it of Lady Augusta Stanley and the late Dean of Westminster, and the hall is laid with encaustic tiles. On the left of the doorway is the matron's room, overlooking the street, with telephonic communication with Westminster Hospital; and to the right the nurses' day-room, 24 feet by 16 feet, also overlooking the street. The fireplace has a marble and carved oak mantelpiece, with the badge of the institution carved over it. On the

side of the staircase is a waiting-room, and there is a good lavatory and cloak-room, with every convenience provided at the side of the passage for the nurses. The refectory for the nurses is at the back, and is 30 feet by 16 feet, and adjacent to it is a serving-room, with lift from the kitchen, and also a serving staircase. In the passage also is a lift for coals and luggage, which goes from the basement and delivers at every floor to the top of the building. On the first floor is the matron's bedroom, which has a speaking-tube and bell from the front door for night applications for nurses; there is also a good linen-room, and eight bedrooms for nurses; there is a good bath-room and other accommodation. On the second floor are ten bedrooms for nurses, with bath-room and other accommodation as below; and on the third floor nine bedrooms, housemaid's closet, sinks, and other conveniences. At the back is a small detached building for the reception of nurses who may return from infectious cases, with bath-room and other conveniences; there is also a disinfecting-room and apparatus in the back yard. The rooms are ventilated by Tobin's tubes, and ceiling ventilators. The sanitary arrangements are of the best kind, the drinking water being entirely separated from all other water; the drains are carefully constructed on the most scientific principles, with air inlet, ventilation, and automatic flushing tank. The style adopted is the Queen Anne style, like the houses in the neighbourhood, and the internal finishings are all carried out in the same style. The woodwork is stained and varnished, and an air of old-fashioned comfort pervades the whole building. The builders have been Messrs. Adamson & Sons, and the architect Mr. Stephen Salter, F.R.I.B.A., of 28 Woburn Place, W.

### GENERAL.

**The Liverpool Art Gallery Committee** propose that the Royal Society of Water-Colour Painters, the Institute, which encourages both oil and water-colour work, and some other London and provincial societies, shall each have a room for the exhibition of the work of their members. The selection and hanging is to be done by a committee chosen by each society.

**The Spring Exhibition** of the works of members and associates of the Manchester Academy of Fine Arts, which has been open for about a month, was closed on Saturday evening last.

**A Deputation** from the Manchester Art Gallery Committee has just returned from visiting the chief London studios. Contributions of works are expected from Sir F. Leighton, Messrs. J. E. Millais, F. Holl, J. Pettie, Marks, Yeames, Morris, Gregory, Prinsep, A. W. Hunt, M<sup>rs</sup> Whirter, Shields, Wylie, Whistler, J. D. Linton, Macbeth, G. F. Watts, and other artists.

**The Duke of Northumberland** has subscribed 8,000*l.* towards the Bishop of Newcastle's fund for new churches.

**Mr. J. J. Bradshaw** (Messrs. Bradshaw & Gass, architects, &c., Bolton) has been appointed one of the surveyors to the Board of Trade under the provisions of the Lands Clauses Consolidation Act, 1845, and the Lands Clauses (Umpire) Act, 1883.

**The St. John's Church Site** has been recommended for the proposed Liverpool Cathedral.

**The Promenade Pier** at Ramsgate, which cost 12,000*l.*, has been purchased by Messrs. Head, Wrightson & Co., for 2,000*l.*

**Mr. James Howorth**, of the Victoria Works, Farnworth, near Manchester, has been awarded a gold medal at Calcutta for his ventilating apparatus.

**Messrs. Thomas Lawrence & Son** supplied the facing bricks for the stables at Ashburnham Mews, illustrated in last week's *Architect*.

**The Pennycook Patent Glazing and Engineering Company** have been awarded a first-class certificate and silver medal at the Calcutta Exhibition for their patent system of glazing without putty.

**The Worcester Architectural Society** intend to obtain photographs of all churches in the diocese that require restoration, and also of the churches that have been restored.

**Mrs. Perry-Herrick**, Beaumanor Park, Leicester, has contributed 1,000*l.* towards the fund for the restoration of Peterborough Cathedral.

**Mr. William Russell**, builder, Queensferry, N.B., who has been provost of the burgh since November 1880, died suddenly on Monday morning. Mr. Russell was a native of Queensferry, and his ancestors had resided there for many generations, his grandfather having been for many years provost, while his father held the office of treasurer, and subsequently became one of the magistrates of the burgh.

**A Letter from Mr. Ruskin, Sen.**, will appear in the forthcoming "Life of James Hogg, the Ettrick Shepherd." The writer deprecates that his son, then sixteen years of age, should be writing so much both of prose and verse, and yet should give but scant signs of originality. He says also that he had been trying to make light of his son's abilities, such as these are, as he did not wish the public to think that he "kept a poet."



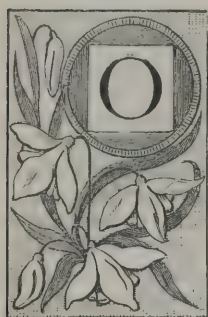
# SUPPLEMENT

TO THE

# ARCHITECT

LONDON, MARCH 22, 1884.

## THE BUILDING TRADES EXHIBITION AT THE AGRICULTURAL HALL.



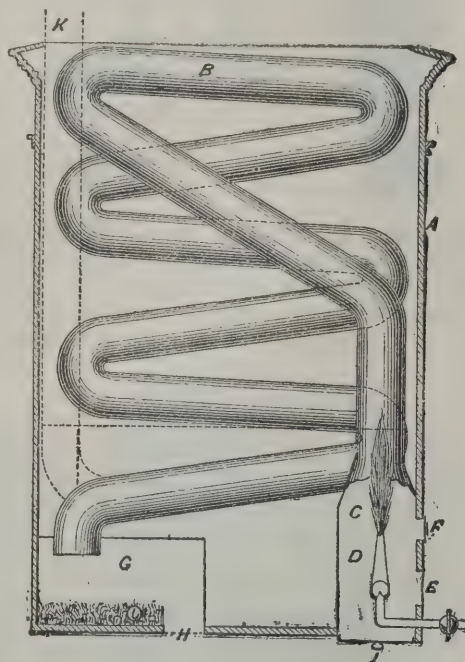
ON Monday next the doors of the Agricultural Hall will be open to the Fifth Annual Exhibition of Building Trades' Materials, Architectural Designs, Sanitary Appliances, &c., and it promises to be quite equal in objects of interest to that of last year, which was generally admitted to have been the best held since the inauguration of the display. At the moment we write, when all is confusion in the Hall, owing to the reception of goods, fitting up of stands, &c., it is difficult to conjecture what appearance

the building will assume on the opening day. We, however, notice many changes. Some old *habitués* are absent, though their places are occupied by others, the number of entries being rather in excess of those of last year. With the powerful rivalry of the forthcoming International Health Exhibition, which is to remain open for months, embracing the entire London season, and in its most aristocratic precinct, that welcomes to its galleries every kind of exhibit admissible at the Building Exhibition, and with gold and silver medals spreading their magnetic influence in perspective, it is not to be wondered at if this year many firms prefer the attractions of South Kensington to those of the Agricultural Hall. Mr. SHRAPNEL may fairly be complimented on the success of his endeavours in keeping this annual display up to its usual standard as regards the number of exhibitors. Neither do we consider that a change of exhibitors detracts from the value of an exhibition. In these days of excessive competition and plethora of invention, it is well that opportunities of this character are accorded to every one of making their specialities publicly known; and although in the opinion of many experts the exhibitions succeed each other too rapidly, there is no doubt that they offer opportunities for publicity to large bodies of visitors that are lacking in the ordinary channels of trade.

### Messrs. Robert Boyle & Son.

Prominent amongst those firms who support the Building Exhibition will be Messrs. ROBERT BOYLE & SON, the ventilating engineers, of Holborn Viaduct and Glasgow. Whatever may be the differences of opinion between those who advocate "power" versus "automatic" ventilation, Messrs. BOYLE & SON have shown that their system is effective in every instance in which it has been applied; and beyond a simple gas-burner which they have occasionally used in places where a very sluggish current exists for the admission of fresh air, or to warm that air in cold weather, we believe that no additional aid has ever been called into request by them in any work they have undertaken, while their exhaust or air-pump ventilator always remains the same, viz. purely automatic, and it has this advantage—that it can be adapted to any class of building. Be it a Turkish mosque or a Chinese pagoda, let the architectural design be a "Queen-Anne" mansion or an "Early English" erection, the air pump or exhaust ventilator can be made to add grace to the building and to carry off its vitiated air. To attempt to describe each article on Messrs. BOYLE'S stand would occupy more space than we have at disposal. Nevertheless, there are certain features that call for detailed remarks. In connection with the great interest now being taken in the housing of the poor, the firm exhibit an economical arrangement for ventilating a

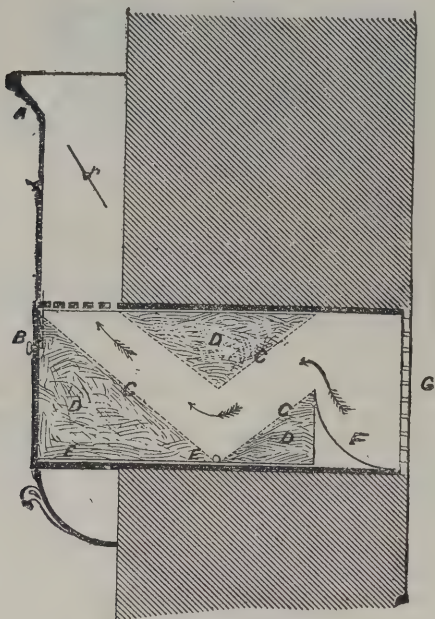
workman's cottage of four rooms. We must remember that in most of our manufacturing districts cottages are the "rule" and large houses let out in tenements the "exception" for the working-classes, consequently an inexpensive mode of ventilating cottages is a desideratum. A model of such a cottage as that mentioned is shown, as well as a plan marking the course of the ventilating pipes. The apparatus consists of a 16-inch diameter patent self-acting air-pump ventilator, with 8-inch pipe, 30 feet of  $4\frac{1}{2}$ -inch galvanised iron pipe, 8 feet of  $3\frac{1}{2}$ -inch ditto, one 8-inch double-junction, two  $3\frac{1}{2}$ -inch junctions, two  $4\frac{1}{2}$ -inch bends, ten galvanised iron rests, and four air inlet brackets of galvanised iron, painted with enamel paint. The whole of this is supplied for the small sum of 4*l.* 10*s.*, and the firm add that, as it is intended exclusively for the benefit of the working-classes, they are prepared to supply *bonâ-fide* orders only at the price quoted, which is the actual cost. The same appliances, if ordered for other uses, will be charged at their ordinary rates. The patent air-warmer (illustrated) is a



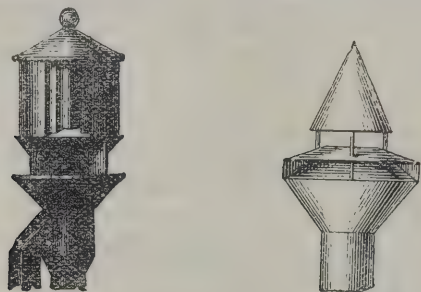
simple arrangement of tubes, in which a single gas jet is introduced for the purpose of raising the temperature of the fresh-air supply to a building in cold weather and to prevent draughts. It has been found to answer its purpose most successfully, the consumption of gas being very small. The air-inlet tubes are also exhibited in several varieties, some having strainers attached to them for freeing the air from smuts and dust; others, again, being provided with a water-tank for washing and purifying the incoming air. In contradistinction to the air-warming appliance, we are introduced to another for cooling the atmosphere in warm weather. This consists of an air-inlet bracket, of which we give a section on next page. This has a double jacket packed with asbestos, and is fitted with Mr. BOYLE'S improved ice receptacles, which cools and purifies the fresh air introduced from the outer atmosphere. There are, in addition, convective tubes for carrying off the heat and products of combustion from gas, ridge ventilators, and



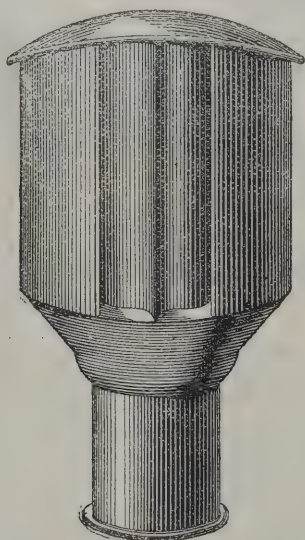
invisible roof ventilators, and a variety of sewer, drain-pipe and soil-pipe ventilators, and cowls for them. We next illustrate a



double-action soil-pipe ventilator and a single soil-pipe cowl. All of these, with the exception of the last-named, are made on the principle of the firm's exhaust ventilator. Mr. BOYLE has applied his system with equal success to the ventilation of railway carriages, and at the Shipwrights' Exhibition, held



some two years since at the Fishmongers' Hall, the gold medal was unhesitatingly awarded to him by the judges for his novel arrangement in connection with the air-pump ventilator for preventing water, as in the shipping of seas, from entering the saloons. We give a cut of the ship ventilator; but the



other arrangement of which we speak requires a diagram to illustrate it, which we are unable to supply. Many ships have been fitted with these appliances, all of which, we are told, answer their purpose admirably. A working model, showing the *modus operandi*, can be seen on the stand. The rest of the exhibit is mainly composed of an exhaustive collection of the air-pump ventilator in different sizes, styles, &c.; and, taken in its entirety, a more complete set of ventilating appliances suitable for all purposes has been seldom seen at any exhibition.

#### The Sanitary Paint Company.

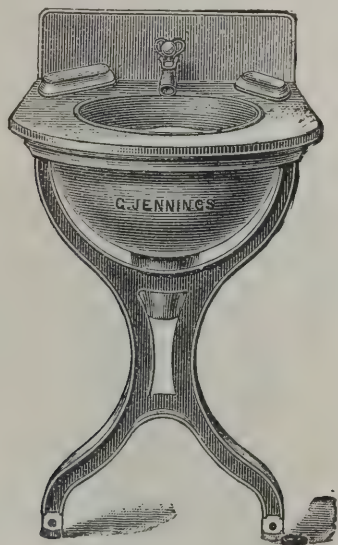
The handsome and effective stand, with its array of bright colours and examples of wall-decoration, of the Sanitary Paint Company (Messrs. GRIFFITHS, BERDOE & Co.), South John Street, Liverpool, will, as usual, form a prominent feature in the display. The advantages of non-poisonous paints are, fortunately, becoming better understood, and are in more extensive demand every year. GRIFFITHS'S patent white, which takes the place of the ordinary white-lead paint as the basis of all colours emanating from the firm, is now so well known amongst the profession and trade, and has been so often alluded to in the columns of *The Architect*, as to render it unnecessary on the present occasion to enter into the details of its manufacture; but, from an hygienic and a humane point of view, its more extended use should be impressed on all those philanthropists (such as the National Health Society, for instance) who labour in the interests of the community at large. Year by year the deadly effects arising from the manufacture of white lead on the health of the workers—of which a large percentage are females—are brought more prominently before us. The report of Mr. REDGRAVE, C.B., to the Government, and the constant representations of vestries and local boards, show too plainly the danger to life and health that all are exposed to who engage in this occupation, and the pitiable objects that from time to time enter our infirmaries and workhouses call loudly for a reform. Even if we were to admit the argument of those interested in the white-lead trade, that it is superior to sanitary paint, far better that a house should be painted a year before its time than that the health and lives of human beings should be sacrificed to a false economy. But GRIFFITHS'S patent white can offer advantages that white lead lacks. Its inventor contends, and we should not be far wrong, perhaps, if we say that it has been proved in practice, that it is more economical than lead paint, for the same quantity will cover a greater surface, and it works more freely under the brush, while in durability as well as colour it claims superiority. The latter feature may be sometimes seen where it has been used in manufacturing towns, the gases evolved attacking all paints, but from these influences the patent white appears to be exempt. Its properties of withstanding heat, which does not blister it, render it particularly adapted for seaside resorts, or where the powerful rays of the sun exert their powers unchecked. Another advantage of which the Sanitary Paint Company can boast is, that every colour they use, even the emerald greens, are non-poisonous. The most delicate tints can be obtained, all mixing harmoniously with the patent white. Several examples of artistic decoration illustrating these facts will be shown, and amongst them specimens of the Company's silicate distemper will be exhibited. The principal feature of this paint is, that it is mixed with water instead of oil, is also non-poisonous, and as a wall decoration it has advantages over paper, not only from a sanitary point, but on account of its durability and economic features. Another embodiment of the Company's speciality is shown as a silicate paint, possessing extreme hardness, and introduced especially for exposed situations, for which experience has shown it to be admirably adapted. In selecting the term "Sanitary Paint Company" the firm adopted a euphemism well borne out by the character of their productions, and to make these complete in an hygienic sense, we should omit a duty if we failed to mention their non-poisonous petrifying liquid for damp walls, &c., which we recommend every visitor to the Exhibition to see the effect of before he leaves the Hall.

#### Mr. George Jennings.

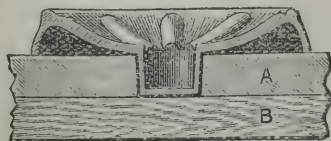
Mr. GEORGE JENNINGS, of Stangate, Lambeth, appears to view the Building Exhibition in a different light to those firms who are absentees on the present occasion, seeing that he occupies a larger space than on any previous occasion, his exhibit covering a considerable length of two avenues, with double frontage. Here are massed a most extensive assortment of those inventions with which the name of this pioneer in sanitary science has become famous, amounting almost to a replica of the contents of the Stangate show-rooms. A feature that will prove one of the most attractive in the display is a handsome combination bath in French polished mahogany casing, embracing some improvements in the fittings, tending to their simplification in use, and placing effects at the disposal of the bather not hitherto attained. The valves—which



are of the patent anti-percussion order patented by the firm—are all on one side of the upright or shower position, the “hot” being the top ones, and the “cold” at the bottom. Between these are the “douche,” “shower,” and “spray” valves. The novelty consists in the bather being enabled, by turning on the hot or cold valve, to have either one, two, or the whole of the different baths at the same time if he pleases, or even the hot and cold together if he wishes to modify the temperature, securing both a luxury and pastime in bathing. The bath itself is of copper japanned. Mr. JENNINGS is an ardent believer in copper for this purpose, and his belief will bear good justification, for not only does the copper become more quickly heated when a warm bath is required, because there is a less thick body to warm than in iron or other substances, but the metal itself when thoroughly worn out—which, with ordinary care, it will not be for perhaps nearly half a century—is worth nearly half its cost. For office use there are some compact and useful shut-up lavatories in mahogany cases, occupying a space in width and breadth of only 21 inches by 12 inches. The interiors are lined with St. Anne marble, and the basins are of the tip-up kind, hot and cold water being laid on. Then we are introduced to a combination lavatory and urinal, the latter being automatically flushed each time it is used. The lavatory is made of St. Anne marble, the urinal being contained in a cupboard underneath, the opening the door acting upon the water-valve, which continues to discharge itself until again closed. The advantage of allowing water to flow before use must be apparent to all who give a thought to the matter. Another appliance of this character forming a useful appendage to an office, is a concealed urinal. It is of polished mahogany exterior, half-circular in form, intended to be placed against the wall, with a flat top that may be utilised for any suitable purpose, and opening with double doors, this action flushing the urinal as in the others before-mentioned. A point of merit in all these appliances are the superior character of the earthenware utensils. In lavatories the firm as usual appear to great advantage, the many examples shown all exhibiting some point of interest. A commendable improvement in the tip-up basins is the firm’s patented arrangement, that when placed at a certain angle they can be lifted out to enable the under portions to be properly cleansed. A cheap form in which this arrangement is carried out is shown in the accompanying illustration, intended for warehouse or school use. The frame

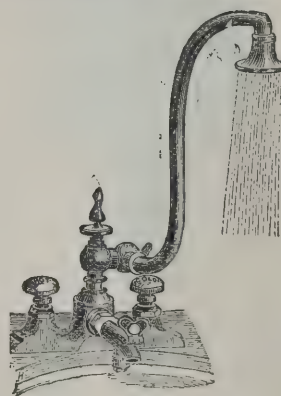
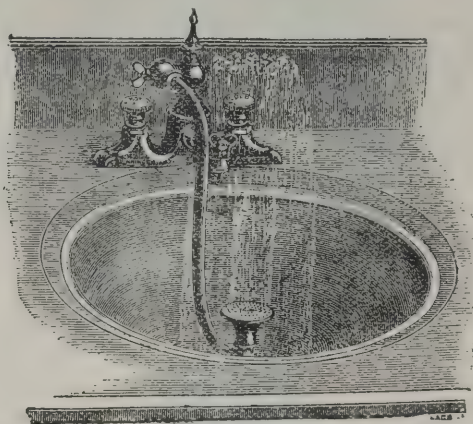


is of galvanised iron, and although the basin can be lifted out as described, if considered necessary for this to be entirely under the control of an attendant, by a simple arrangement it can be locked, so as to prevent its being tampered with. Another improvement introduced a short time since by Mr.

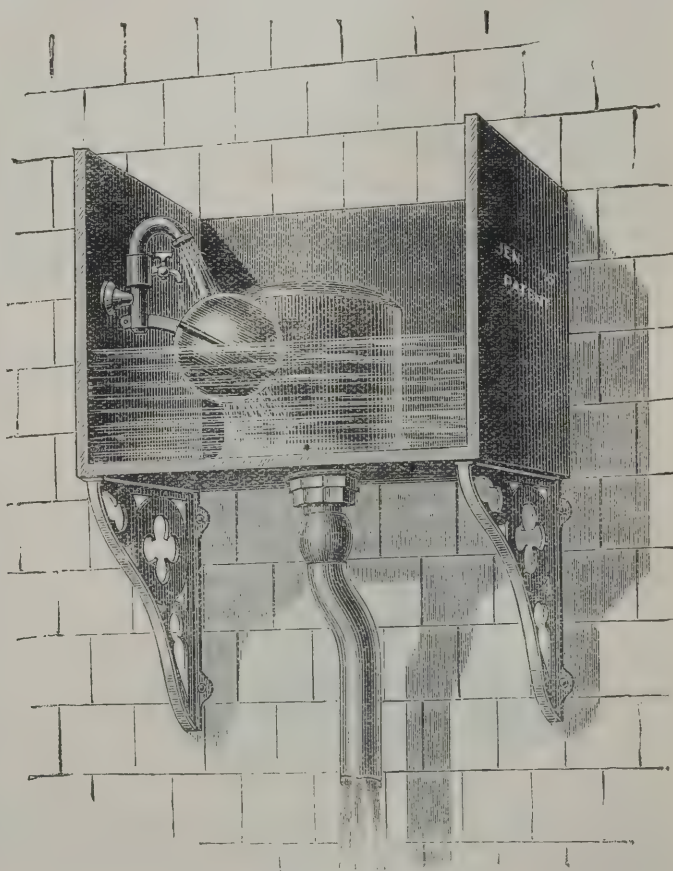


JENNINGS is in the soap and brush trays for lavatories, which we also illustrate. In place of the sunken receptacles usually

to be found, the marble slabs which often became clogged and emitted unpleasant odours, Mr. JENNINGS introduces a loose tray, such as would be used in the ordinary wash-stand, and dropping by a “sink” into a receptacle formed for it in the marble. Our remarks on lavatories would not be complete did we not mention the patent shower and spray shampooing apparatus, which, as the drawing illustrates, can be attached to any lavatory basin, and by means of a universal joint can be

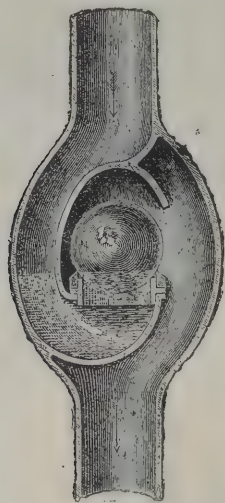


worked in any direction. In public urinals Mr. JENNINGS has scored many successes, having been called upon to supply those of his manufacture to many Continental and other foreign bodies, besides large numbers that are constantly being

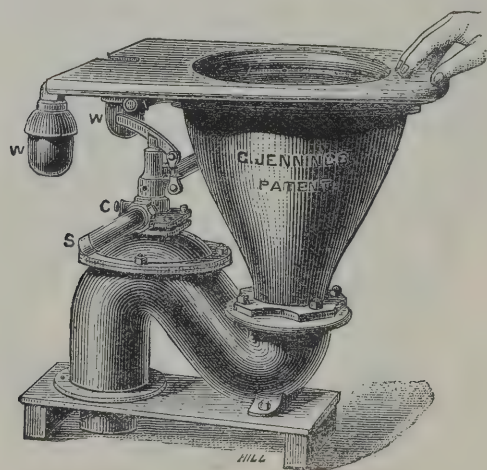




erected in England. An improvement is shown here for the first time in the arrangements for automatic flushing (illustrated), dispensing with the step or treadle action. This consists in fixing a cistern overhead with a syphon and ball-valve, the latter acting in an inverse manner to the usual mode. Instead of the water flowing slower as the ball rises, by an arrangement of valves it opens a second when the cistern is nearly full, giving additional force to the syphon action immediately it is brought into play. This can be regulated to flush at given intervals, and by a branch pipe carried from the urinal it flushes the under portion at the same time, having a pressure of about 15 lbs. behind it. Mr. JENNINGS'S patent ball-traps, which were invented by him long before the Bower trap was introduced here from America, should not be overlooked, and are being extensively adopted for baths and lavatories, and for the overflows to closets. By the sectional drawing appended its action will be readily understood. As the

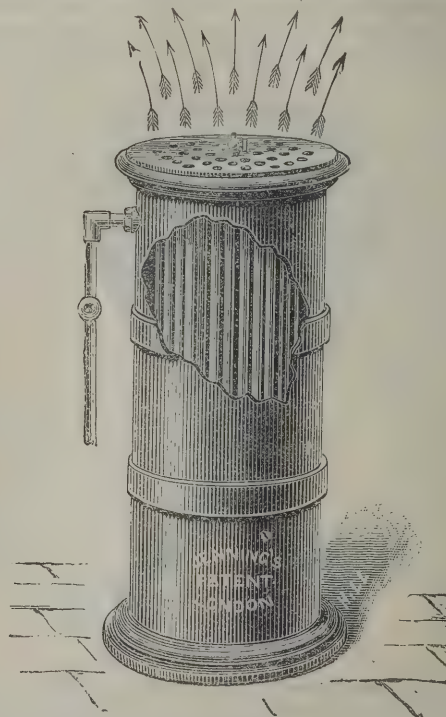


water flows from above, the route it takes causes the india-rubber ball to rise from its seat, and allows it to pass down the pipe, when the ball falls into its normal position, but should a back pressure occur, the ball is sealed more securely than before, as the pressure is directly upon it. This valve deserves to be universally known. A new wash-out closet of somewhat novel character is exhibited. It is composed of an entire piece of blue-pattern earthenware, complete in itself, oval in shape, flat on the bottom of the pan, with the outlet in the front; but instead of the fan to spread the water a series of holes at the back of pan sends it forward in jets with great force. A simple seat hinged is the only addition required to this closet, and by lifting this it can be used as a urinal, or for emptying slops. As this is intended to be used in the lower part of a household or for public places, where probably stone or brick floors and tile fittings would be in existence, the whole can be readily flushed with a hose-pipe, and kept scrupulously clean. Another closet intended for warehouses or factories, as illustrated, is much to be commended for its automatic



cleanly features. This has a weighted spring seat, always standing upright when the closet is not in use. The action of drawing it down opens the valve and secures a flush, and on

the person rising from it and its assuming its normal position a second flush occurs, thus securing two each time it is used. In addition to these there are specimens of all the other closets made by the firm, some of them having served as models to rival manufacturers on which to base more recent introductions. There is the original "wash-out" first invented by Mr. JENNINGS, the double-seated valve-closet, the patent valve-closet and trap in one piece of earthenware, the patent "trapless" valve-closet—all of which have been fitted up in various parts of the country in large numbers. The Bramah closet is also shown in an improved form, securing an after-flush when the discharge-valve closes. This closet is claimed to be especially adapted for Continental cities, and where the supply of water is limited, and was originally designed for the Rio de Janeiro City Improvements Company, to whom we understand some thousands have been supplied; and its great success, based upon its cleanliness and efficiency, caused the firm to introduce it into the home market, where it is securing equal approbation. Another special feature of the JENNINGS firm are household sinks, and these are exhibited suitable for all parts of the house, kitchens, sculleries, butlers' pantries, and housemaids' closets. A pattern originally made for artisans' dwellings, and of which large numbers have been supplied, would be found equally useful in houses of a better class, and with water laid on it not only offers the advantages of an ordinary sink, but, having a deep trough, may be used for washing up the household crockery, for washing linen, or a bath for children. The collection of plumbers' materials is of an exhaustive character, and there is the usual assortment of sanitary pipes and terra-cotta ware made at the firm's manufactory, Parkstone, Dorsetshire. Another section of the exhibit is devoted to electrical appliances in the form of bells, burglar-alarms, indicators, and the patent automatic electric speaking-tubes, the invention of the firm, of which a detailed account has been given in the columns of *The Architect*. There is yet one other invention of this enterprising firm that deserves mention ere we close our remarks, viz. their patent warming and ventilating apparatus. This, as the illustration depicts, is a most simple appliance, and where steam or a hot-water service is at hand a ready and effective means of heating

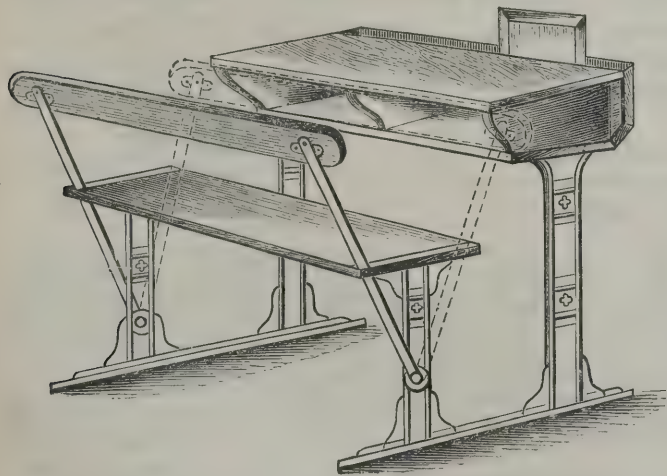


buildings of any size. It is formed of an upright cylinder, containing a number of tubes, communicating with the external air by means of a pipe passing through the wall. Around these the hot water or steam circulates, warming the air in its passage through the tubes, and emitting a constant and copious supply throughout the apartment in which it may be fixed, and giving warmth and ventilation at the same time. By the addition of a stop-cock the supply can be regulated to the greatest nicety. Among the notable buildings to which the system has been applied we may mention the Borough Hospital at Brighton and the Metropolitan and City Police Orphanage at Twickenham.



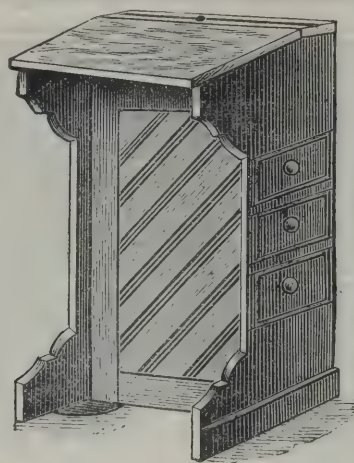
**Messrs. Hodkinson & Clarke.**

We are pleased to find that Messrs. HODKINSON & CLARKE, of Small Heath, Birmingham, are not amongst the absentees, and while they purpose courting the "new love" at South Kensington, they evidently do not intend to cease their attentions to the old one, for they occupy a much larger area than they have done on previous occasions, and introduce us to several of their specialities not hitherto shown here. The pretty little structure of a house in miniature, which may be termed summer arbour, smoking-room, or anything that fancy may indicate, but is here used as a means for exhibiting the various blinds the firm have become such experts in manufacturing, occupies its old position, and will no doubt be welcomed again by old friends, as well as strangers, for it always proves one of the most attractive objects in the Exhibition. Here we have the "Queen Anne" blind adapted for ordinary windows, which we have described in detail on previous occasions, providing a permanent shade for windows, and, if required, a secure shutter; and, while arresting the glare of the sun from entering the apartment, offering efficient means for ventilation. The "Early English" revolving shutter is applicable to any room, though more in keeping, perhaps, to that style of building from which it takes its name. Made to draw down as a blind, it is poised so accurately that it may be controlled by a child, and without disarranging curtains or furniture, while the surface from its shape offers free scope to the talent of the decorator to form an ornament of what is in most instances but an unsightly feature in a well-appointed room. There are several specimens of the metallic Venetian blinds that are coming largely into use, and that the firm have termed "the blind of the future." A choice collection of festoon blinds on spring rollers, are particularly worth notice. The material is Madras muslin, all having a pattern upon them, and being finished and fringed in a very tasteful manner. The Madras muslin, while arresting the rays of the sun effectually, is far more pleasing to the eye than a self-coloured cloth. The remaining objects in this *petit salon* are specimens of painted and stained glass for short blinds and other decorative purposes, for which the Midland metropolis may fairly lay claim to some reputation. Turning to the new portion of Messrs. HODKINSON & CLARKE's exhibit, we find some excellent specimens of revolving shutters—no mere toys or models, but full-size appliances that can be tried and tested, and of superior make and design. Here, too, is a large collection of school furniture and educational appliances of the best and most approved construction. There are several "reversible" seats and desks in the market, but we do not remember having seen one so simple as the "Canadian reversible seat-rail dual desk," which we illustrate. While providing a back to the seat



for the pupil when at work, it can be thrown back against the desk, as shown by the dotted lines, in the event of room being required for readings or other entertainments, a row of seats with backs being thus formed, facing the opposite direction. Another simple but useful appendage is an assistant-master's desk, which is made with either drawers or cupboard at the sides. This is usually mounted upon castors, enabling it to be readily moved to any part as necessities arise. There are several other seats and desks of different design, most of which possess some point of interest. Neither have Kindergarten appliances been lost sight of by the firm, and several pleasing and interesting features adapted to the youthful mind will be

found in the collection. Another recent introduction, which is shown here in section, is a school partition, 10 feet high and of the same width, complete with door, which offers the advantage of dividing a large room into sections entirely independent



of each other. Looking at the educational appliances in their entirety, we should say the aim of the makers appears to have been to provide them of the most suitable kind for modern requirements.

**Messrs. W. H. Lascelles & Co.**

MESSRS. W. H. LASCELLES & CO., 121 Bunhill Row, E.C., exhibit some very excellent specimens of their noted concrete, and a collection of joinery work of their manufacture, all possessing considerable merit, certain individual samples of which will no doubt attract much attention. Messrs. LASCELLES generally manage to introduce us to examples of their work made to special order, and on the present occasion the display is made up largely of such examples. Thus, in their concrete, two windows with mullions and transoms, made for the new wing of Christ's Hospital, City Road, from designs by Mr. JOHN O. ABBOTT, are sent here for inspection previous to delivery. A large portico for the Wesleyan chapel at Lynn, designed by Mr. HATCHAM SMITH, A.R.I.B.A., will have the privilege of being first seen here; and there are three enriched panels, and a piece of large cornice of a light Mansfield colour, a portion of work now in hand for some new mansions in Victoria Street, Westminster. A circular fountain curb, cast in one piece without joints, gives a fair idea of the dimensions to which it is possible to manufacture this artificial stone in a solid body, and there are sundry specimens of the material adapted for walls, pathways, copings, balusters, fender-kerbs, &c. In looking through the joinery work, we notice in particular a green dado, with fortification panels filled in with metal centres, and a pair of handsome teak entrance-doors, heavily moulded and with raised panels, together with a massive wreathed mahogany hand-rail, forming a trio of no mean merit. Three handsome wood chimney-pieces, each of different design, are also exhibited, and some excellent specimens of hard wood panelling help to swell the display. Sundry other specimens, being portions of work actually in hand, though at the moment not available for description, will complete an exhibit that on all previous occasions has collected around it a number of admirers.

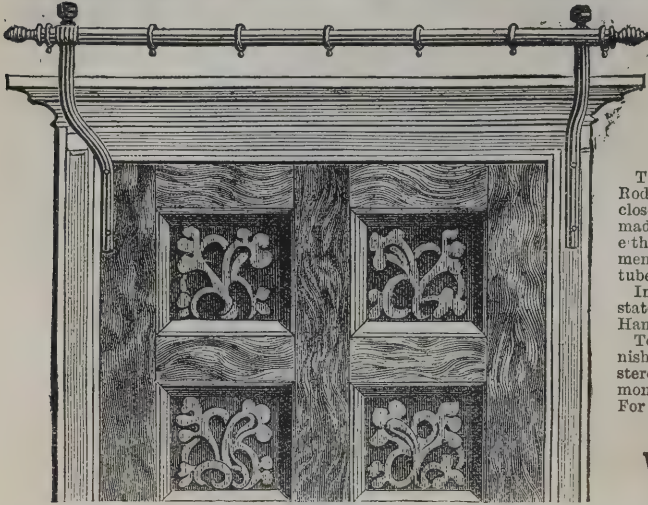
**Mr. Henry Bassant.**

The Exhibition is not so "strong" in parqueterie on this occasion as it was last year, but the collection of Mr. HENRY BASSANT, of the West London Parquet-flooring Works, Wells Mews, Wells Street, Oxford Street, is of an attractive character. The designs shown are for flooring and dados, and embrace a number of very tasteful patterns, the blending of colours being remarkably good. There is a handsome design in satinwood, and the admixture of two colours in teak forms a durable and attractive floor-covering. A Grecian "key" in cedar on light oak is very pretty, and pollard oak is introduced in others with good effect. Brown oak and walnut are also used in combination with lighter woods, and a new flooring in pitch pine that can be sold at the low price of 4d. per square foot, is shown here for the first time. Mr. BASSANT's work is well known in the trade as amongst the most reliable made, and we almost regret that owing to a full complement of orders he has not been enabled to make a larger display.



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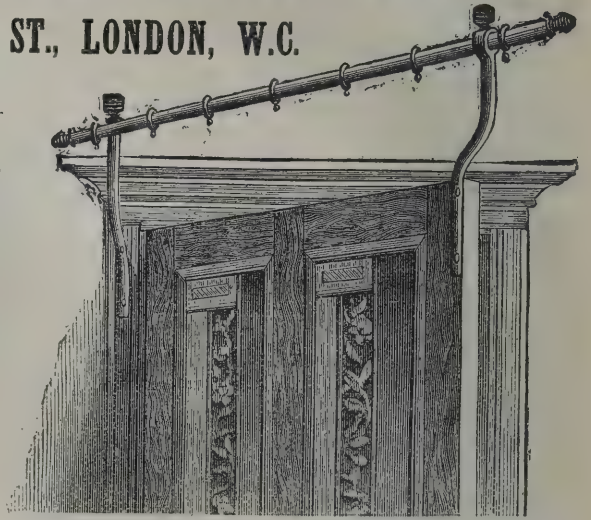
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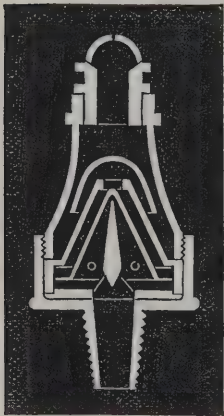
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# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MARCH 22, 1884.

### TENDERS, ETC.

*As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."*

### EDITORIAL NOTICES.

*The authors of signed articles and papers read in public must necessarily be held responsible for their contents.*

*No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.*

*Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.*

### COMPETITIONS OPEN.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**NEWCASTLE-ON-TYNE.**—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

### CONTRACTS OPEN.

**ABERDEEN.**—April 1.—For Building Warehouse, &c., Culter Street Mills. Messrs. Jenkins & Marr, C.E., 16 Bridge Street, Aberdeen.

**ABERGAVENNY.**—For Building Residence and Stables. Mr. E. A. Johnson, Architect, Abergavenny.

**ACCRINGTON.**—For Building Liberal Club. Messrs. Maxwell & Tuke, Architects, 27 Prince's Street, Manchester.

**ANNAM.**—March 24.—For Building Hall, Cottage, Vestry, &c. Mr. Crombie, Architect, Dumfries.

**BALLYMONEY.**—March 31.—For Building a Church. Messrs. Young & Mackenzie, Architects, Belfast.

**BARNESLEY.**—March 22.—For Building Stable, Coach-house, &c. Mr. H. Crawshaw, Architect, 1 Pitt Street, Barnsley.

**BEESIDE COLLIERY.**—For Building Church. Mr. James Hey, Beeside Colliery, Newcastle-on-Tyne.

**BEESTON HILL.**—March 27.—For Enlargement of Chapel. Mr. W. Hill, Architect, 11 Park Square, Leeds.

**BLACKBURN.**—March 25.—For Building Seven Shops, Salford Bridge. Messrs. Myers, Veevers and Myers, Architects, 15 Chapel Street, Preston.

**BRADFORD.**—March 24.—For Building Residence. Mr. H. Isitt, Architect, Queen Anne Chambers, Bradford.

**BRISTOL.**—March 24.—For Building Offices, Warehouses and Mills. Mr. H. J. Jones, Architect, Wellington Chambers, Bridge Street, Bristol.

**BUDLEIGH SALTERTON.**—April 2.—For Building Wesleyan Sunday School Rooms. Mr. W. H. Wells, Architect, 15 High Street, Budleigh Salterton.

**BURGHEAD.**—March 28.—For Building House. Messrs. J. & J. R. Rhind, Architects, 51 High Street, Elgin.

**BURNLEY.**—March 25.—For Additions to Schools. Mr. T. Bell, Architect, 16 Nicholas Street, Burnley.

**BURY.**—April 7.—For Removal of Heap Bridge over the River Roch, and Erection of Store Bridge in lieu. Mr. W. Radford, Bridgmaster, 1 Princess Street, Manchester.

**COBHAM.**—March 31.—For Chapels, Boundary Fences, Gates, &c. Mr. G. H. Birch, Architect, 68 Lincoln's Inn Fields.

**CONISBORO'.**—March 29.—For Construction of Brick Gasholder Tank. Mr. R. Bridge, Gas Engineer, Doncaster.

**EDINBURGH.**—March 24.—For Construction of Brick Gasholder Tank at Blandfield. The Engineer to the Gas Company, 11 Baltic Street, Leith.

**EATON BISHOP.**—April 3.—For Restoration of Church. Mr. T. Nicholson, F.R.I.B.A., Hereford.

**ENFIELD.**—March 27.—For Building Water Tower. Mr. W. Kitteringham, Surveyor, Court House, Enfield.

**ESH.**—March 24.—For Building Thirty-five Cottages at Colliery. Mr. J. G. Guy, Peases' West Colliery Offices, Crook.

**FOLKESTONE.**—March 28.—For Building Residences and Offices. Mr. J. Gardner, Architect, 2 Cheriton Place, Folkestone.

**GOSPORT.**—March 31.—For Additions to Police Station. Mr. J. Robinson, County Architect, County Hall, Winchester.

**HALIFAX.**—March 25.—For Extension of Dye Works and Warehouse. Mr. T. L. Patchett, Architect, George Street Chambers, Halifax.

**HOLYWELL GREEN.**—March 31.—For Building Fireproof Mill, &c., Warehouse, Engine-houses, and Chimney. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**ILKESTON.**—March 27.—For Building Board Schools. Mr. Tait, Architect, 28 Friar Lane, Leicester.

**KING'S LYNN.**—March 25.—For Additions to Burleigh House. Mr. J. A. Hillam, South Everard Street, King's Lynn.

**LEEDS.**—March 31.—For Enlargement of Two Board Schools. Mr. R. L. Adams, Architect, Imperial Buildings, Leeds.

**LEYBURN.**—March 31.—For Building Wesleyan Chapel and School. Mr. C. Anderson, Architect, 12 Lendal, York.

**LITTLE ROYD.**—March 26.—For Erection of Foundry, Engine-Houses, Chimney, Cart Shed, Stable, &c. Mr. J. B. Abbey, Surveyor, 6 King Street, Huddersfield.

**LIVERPOOL.**—March 29.—For Contract 6 for Zoological Gardens, the Great Hall (Timber-framed). Messrs. W. Sugden & Son, Architects, Leek.

**MIRFIELD.**—March 26.—For Building Warehouse, Willey Rooms, Tenter Stoves, &c. Messrs. Kirk & Sons, Architects, Dewsbury.

**MOREPETH.**—April 18.—For Extension of County Lunatic Asylum. Mr. J. Cresswell, County Architect, Moot Hall, Newcastle-on-Tyne.

**NETHERLEY BRIDGE.**—March 27.—For Building Engine house, &c., at Pumping Station. Mr. Carr, Engineer, Gasworks, Widnes.

**OSSETT.**—March 28.—For Building Shed at Mills. Mr. R. S. Firth, Architect, Bank Street, Ossett.

**PORTHCAWL.**—April 7.—For Additional Block to The Rest. Mr. John Prichard, Architect, Llandaff.

**PRESTON.**—March 27.—For Extension of Stables and Construction of Goods Warehouse. Mr. S. B. Worthington, Victoria Station, Manchester.

**READING.**—March 29.—For Building Residence for Waterworks Manager. Messrs. C. Smith & Son, Architects, 161 Friar Street, Reading.

**RHYMNEY.**—March 24.—For Construction of Bridge, Chapel, Boundary Walls, &c., for Cemetery. Mr. Lloyd Marks, Surveyor, 59 High Street, Rhymney.

**ROTHWELL.**—For Erection of Buildings at Mill. Mr. Henry Ross, Architect, 5 Birch Street, Acorington.

**SOUTHAMPTON.**—March 25.—For Building an Oddfellows' Hall at Hythe. Mr. D. Davy, Cadland, Southampton.

**SOUTH SHIELDS.**—March 28.—For Enlarging House and Shop. Mr. T. Southron, Architect, 70 King Street, South Shields.

**ST. ANNE'S-ON-THE-SEA.**—April 4.—For Lengthening Jetty. Messrs. Garlick, Park & Sykes, C.E., Preston.

**STOURBRIDGE.**—April 1.—For Construction of Refreshment Rooms. Plans at the Engineer's Office, Wolverhampton Station.

**SWANSEA.**—March 31.—For Building Fire Brigade Station. The Borough Surveyor, Guildhall, Swansea.

**SWINDON.**—March 24.—For Building Infants' School, Boundary Walls, &c. Mr. W. Drew, Architect, 39 Victoria Street North, Swindon.

**TREORRY.**—March 27.—For Additions to Lodge, Rhondia Joint Cemetery. Mr. T. R. Phillips, Architect, 20 Market Square, Pontypridd.

**TYTHERINGTON.**—March 28.—For Re-seating and Restoring Church. Messrs. Pope & Paul, Architects, 3 Unity Street, Bristol.

**WETHERAL.**—March 30.—For Building Detached House. Mr. James Murchie, Architect, Lowther Street, Carlisle.

**WHITECHAPEL.**—March 25.—For Nurses' Rooms at Infirmary. Mr. W. A. Longmore, Architect, 7 Great Alie Street, Whitechapel.

**YEOVIL.**—March 25.—For Erection of Public Baths. Mr. J. Johnson, Architect, 9 Queen Victoria Street, E.C.

### TENDERS.

#### BAILIFFE BRIDGE.

For Building Small Cotton Mill, Bailiffe Bridge, for Messrs. Ellis, Stott & Sons.

Accepted Tenders.	
Birkby & Son, Wyke, mason . . . . .	£2910 0 0
Birkby & Son, Wyke, carpenter . . . . .	535 0 0
Broughton, Brighouse, ironfounder . . . . .	125 0 0
Smithies, Bradford, slater . . . . .	79 10 0
Gledhill & Barraclough, Wyke, plasterer . . . . .	78 15 0
Walton, Wyke, plumber . . . . .	50 16 0
Naylor, Brighouse, painter . . . . .	21 10 0

#### CORK.

For Alterations and Additions to Offices at Lapp's Quay, Cork, for the Harbour Commissioners. Mr. P. BARRY, Engineer.

Hill . . . . .	£625 0 0
Lingfield . . . . .	588 9 0
Martin . . . . .	576 0 0
Fitzgerald . . . . .	523 13 0
McMullen . . . . .	496 0 0
THOMAS (accepted) . . . . .	454 0 0



**BURSLEM.**

For New Shop Front to Premises, Newcastle Street, Burslem, and Re-fixing Old Front in Adjoining House, for Mr. G. Alcock. Mr. AMBROSE WOOD, Architect, Hanley. Quantities not supplied.

Cornes, Hanley . . . . .	£80 0 0
Hammersley, Hanley . . . . .	43 0 0
GRATTON, Burslem (accepted) . . . . .	43 0 0

**BURTON-ON-TRENT.**

For Extension of Girls' School, Guild Street, Burton-on-Trent. Messrs. GILES & BROOKHOUSE, Architects, Derby. Quantities by the Architects.

Walker & Slater, Derby . . . . .	£3,500 0 0
Hewett, Derby . . . . .	3,400 0 0
Wildman, Burton . . . . .	3,357 14 6
Hadfield, Burton . . . . .	3,155 0 0
Varlow, Burton . . . . .	3,000 0 0
Mellers, Burton . . . . .	2,987 0 0
Wheelodon, Burton . . . . .	2,976 0 0
Mason, Burton . . . . .	2,929 0 0
Wileman, Burton . . . . .	2,919 0 0
Stevenson & Son, Burton . . . . .	2,894 0 0
Hunter, Burton . . . . .	2,890 0 0
Pemberton, Derby . . . . .	2,890 0 0
Chamberlain Bros., Burton . . . . .	2,886 0 0
Hodges, Burton . . . . .	2,850 0 0
De Ville, Burton . . . . .	2,830 10 0
MADDOCKS, Burton (accepted) . . . . .	2,790 0 0

**CUMMERSDALE.**

For Building School and Master's House, Cummersdale. Mr. JAMES MURCHIE, Architect, Carlisle. Accepted Tenders.

Little, builder . . . . .	£890 0 0
Reed, joiner . . . . .	330 0 0
Nanson, slater . . . . .	103 10 0
Johnson, plumber . . . . .	60 0 0
Ferguson, plasterer . . . . .	31 0 0
Kirk & Robley, painter and glazier . . . . .	19 19 0
Total . . . . .	£1,434 9 0

**DALTON-IN-FURNESS.**

For Alterations and Additions to the Cemetery Lodge, Dalton-in-Furness.

Nelson . . . . .	£187 10 0
TOWNLEY (accepted) . . . . .	154 10 0

**DARTMOUTH.**

For the Restoration of the Chancel of Tounstal Church, Dartmouth. Mr. E. H. BACK, Architect.

Edgcombe & Harvey, Strete . . . . .	£80 0 0
RUNDLE, Kingsbridge (accepted) . . . . .	75 14 6
Architect's estimate . . . . .	79 0 0

**DAVENTRY.**

For Building Bakehouse and Flour-room, High Street, Daventry, for the Co-operative Society.

Clayson, Cooknoe . . . . .	£219 0 0
Cattell, Daventry . . . . .	212 10 0
S. & J. Adams, West Haddon . . . . .	180 18 10
Gee, Daventry . . . . .	155 0 0
BARLOW, Rothwell (accepted) . . . . .	120 0 0

**EARLSDON.**

For Erection of Two Residences, Moore Street, Earlsdon, near Coventry, for Mr. Wm. Flinn. Mr. Wm. TOMLINSON, Architect, Coventry. Quantities by the Architect.

Brown, Coventry . . . . .	£670 0 0
Haywood, Coventry . . . . .	625 0 0
Chamberlain, Coventry . . . . .	595 10 0
Jephcott, Coventry . . . . .	591 8 6
Bernade, Coventry . . . . .	583 0 0
Isaac, Foleshill . . . . .	569 3 9
Blakeman, Coventry . . . . .	568 0 0
Beacham, Allesley . . . . .	540 0 0
Burdett, Earlsdon . . . . .	503 4 5

**EAST GRINSTEAD.**

For Erection of Stable, Coach-house, and Pair of Cottages, East Grinstead. Mr. S. W. HAUGHTON, Architect, East Grinstead.

Coddy, East Grinstead . . . . .	£274 0 0
Taylor, Forest Row . . . . .	625 10 9
Charlwood Bros., East Grinstead . . . . .	610 17 6
Beard, East Grinstead . . . . .	550 0 0
Foster, East Grinstead . . . . .	435 0 0
PLEDGE (accepted) . . . . .	485 0 0

**EDENBRIDGE.**

For Erection of Villa Residence, with Coach-house, Stable, &c., Dincross, near Edenbridge. Mr. S. W. HAUGHTON, Architect, East Grinstead.

GOODWIN BROS., Edenbridge (accepted) . . . . .	£970 0 0
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**FACIT.**

For Building Three Houses and Stable at Facit. Mr. THOMAS HOLT, Architect, Market Street, Whitworth.

Rishton, mason, &c. . . . .	£372 0 0
Hargreaves, joiner . . . . .	124 0 0
Rishton, slater . . . . .	39 10 0
Stanworth, plasterer . . . . .	28 0 0
Handley, plumber, glazer, and gasfitter . . . . .	20 0 0
Painting not let.	

**HARPENDEN.**

For Building Pair of Villa Residences, Harpenden. Mr. J. R. BROWN, Architect, Luton. Quantities not supplied.

Miskin, St. Albans . . . . .	£1,460 0 0
Etheridge, St. Albans . . . . .	1,369 0 0
Ransom, Arlesey . . . . .	1,303 0 0
White, Dunstable . . . . .	1,290 0 0
DUNHAM, Luton (accepted) . . . . .	1,250 0 0
Parkins, Luton . . . . .	1,248 0 0

**HANLEY.**

For Additions to Premises, Clifford Street, Hanley, for Mr. Chambers. Mr. AMBROSE WOOD, Architect, Regent House, Hanley. Quantities supplied.

Cooper & Jones . . . . .	£125 0 0
Cornes . . . . .	115 0 0
HAMMERSLEY (accepted) . . . . .	75 0 0

**HENLEY-ON-THAMES.**

For Alterations and Additions to Highmoor Hall, Oxon. (1st Section). Mr. N. INMAN, Architect, 7 Bedford Row, W.C.

HOLLY & BUTLER, Nettlebed (accepted) . . . . .	£238 11 6
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**JARROW.**

For Works of Street Paving, Jarrow. Mr. J. PETREE, Borough Surveyor.

Maughan . . . . .	£300 0 0
Adams . . . . .	269 9 4
CALLAGHAN (accepted) . . . . .	243 3 5
Surveyor's estimate . . . . .	313 6 1

**KEIGHLEY.**

For Street Improvement Works. Mr. W. H. HOPKINSON, Borough Engineer.

Spaight, Leeds . . . . .	£277 0 0
Browne, Manchester . . . . .	275 0 0
Smith & Whittaker, Keighley . . . . .	252 0 0
Dewhurst, Halifax . . . . .	250 0 0
Hudson, Halifax . . . . .	247 0 0
Tempest, Keighley . . . . .	233 0 0
RHOADS BROS., Shipley (accepted) . . . . .	214 0 0
Engineer's estimate . . . . .	235 0 0

**LONDON.**

Messrs. J. L. Bacon & Co., of Upper Gloucester Place, have obtained the contract for Heating and Ventilating the Working Women's College, London, and for Warming the Police Station, Aston, near Birmingham.

For Repairs to the Duke of Clarence, Scafell Street Hackney Road, for Mr. B. Hyams. Mr. EDWARD BROWN, Surveyor, Hanbury Street, Spitalfields.

Salt . . . . .	£192 0 0
MARR (accepted) . . . . .	185 0 0

For Pulling-down and Rebuilding Premises, 109 Fenchurch Street, E.C. Messrs. E. & E. B. ELLIS, Architects, 9 Fenchurch Street, E.C.

Corder . . . . .	£6,486 0 0
Colls & Son . . . . .	6,480 0 0
Greenwood . . . . .	6,345 0 0
Ashby Bros. . . . .	6,187 0 0
Ashby & Horner . . . . .	6,186 0 0
Roberts . . . . .	6,144 0 0
Higgs & Hill . . . . .	6,144 0 0
Woodward . . . . .	6,100 0 0

For Building Premises in Essex Street, Strand. Mr. H. C. BOYES, Architect.

Corder . . . . .	£5,377 0 0
Dove Bros. . . . .	5,225 0 0
Roberts . . . . .	5,141 0 0
Grover . . . . .	5,095 0 0
Patman & Fotheringham . . . . .	4,973 0 0
Gould & Brand . . . . .	4,873 0 0
Macey . . . . .	4,823 0 0
Nightingale . . . . .	4,820 0 0
Green . . . . .	4,759 0 0
Greenwood . . . . .	4,717 0 0

For the Erection of a Depot with Houses for Manager and Horsekeeper, in Dyne Road, Kilburn, for Messrs. Carter, Paterson & Co. Mr. WILLIAM EVE, 10 Union Court, Old Broad Street, E.C., Architect.

Rowe . . . . .	£4,062 0 0
Nye . . . . .	3,813 0 0
D. D. & A. Brown . . . . .	3,780 0 0
Harris & Wardrop . . . . .	3,723 0 0
Downs . . . . .	3,720 0 0
Rogers . . . . .	3,663 0 0
Higgs, Loughborough Junction, S.E. . . . .	3,560 0 0

For Painting and Whitewashing at the Casual Wards of the St. Marylebone Workhouse, for the Guardians of the Poor of St. Marylebone. Messrs. H. SAXON SNEILL & SON, Architects.

Lathey Bros. . . . .	£245 0 0
Bray & Pope . . . . .	222 0 0
Wickham . . . . .	222 0 0
Wall Bros. . . . .	189 0 0
Sheerman & Sons . . . . .	185 19 0
Derby . . . . .	181 0 0
Bamford . . . . .	160 0 0
Birch . . . . .	140 0 0
Steward . . . . .	123 8 2
Vigor & Co. . . . .	117 10 0

**LOSSIEMOUTH.**

For Building Public Hall, Lossiemouth, N.B. Mr. JOHN MILNE and Mr. DUNCAN CAMERON, joint Architects.

Cameron, Forbes, mason . . . . .	£500 0 0
Shaw, Lossiemouth, carpenter . . . . .	319 10 0
Gordon, jun., Elgin, plumber . . . . .	60 0 0
Hume & Son, Buckie, plasterer . . . . .	49 10 0
Murray, Lossiemouth, slater . . . . .	44 10 0
Kintrae & Son, Elgin, house painter . . . . .	25 10 0

**MORLEY.**

For Building Minister's House, including Fence Walls, Morley. Mr. THOMAS A. BOTTEY, Architect. Quantities by the Architect.

J. & J. Sudgen, Morley, mason . . . . .	£345 0 0
Watson, Morley, carpenter and joiner . . . . .	200 0 0
B. & J. Leadbeater, Birstall, plasterer . . . . .	60 0 0
Sissons, Morley, plumber . . . . .	43 0 0
Todd & Armitage, Morley, painter . . . . .	16 0 0
Heavyside, Leeds, slater . . . . .	36 10 0

Total . . . . .	£700 10 0
Architect's estimate, £700.	

**PETERBOROUGH.**

For Erection of Seven Shops and House in Westgate, Peterborough. Mr. LAWRENCE BRIGHT, Architect, Nottingham. Quantities by the Architect.

Coe . . . . .	£7,350 0 0
G. & D. Gray . . . . .	7,249 0 0
Slight . . . . .	6,950 0 0
Woolston . . . . .	6,545 0 0
DUDDON & PARRISH (accepted) . . . . .	6,200 0 0
Hicks, Peterborough . . . . .	6,180 0 0

**REDDISH.**

For Patent Heating Apparatus, Reddish Police Station. RENTON GIBBS, Liverpool (accepted).

**REDHILL.**

For the Erection of new School and Repairs to existing Buildings, St. John's, Redhill. Mr. S. W. HAUGHTON, Architect, East Grinstead.

Holdsforth, Reigate . . . . .	£1,339 0 0	£1,050 0 0
Dives, Lingfield . . . . .	1,262 10 0	1,045 10 0
Pent, Meadvale . . . . .	1,265 0 0	920 0 0
Nightingale Bros., Reigate . . . . .	1,246 0 0	865 0 0
Pledge, East Grinstead . . . . .	1,207 0 0	817 0 0
Charlwood Bros., East Grinstead . . . . .	1,325 0 0	695 0 0

**ROTHERSAY.**

For Erection of Sheds and Waiting-room Accommodation on the Pier, Rothersay, N.B.

CHRISTIAN (accepted) . . . . .	£1,400 0 0
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**SHREWSBURY.**

For Works at the Old School Buildings for the Free Library Committee of the Shrewsbury Corporation.

**Accepted Tenders.**

Everrall & Morris, building and painting . . . . .	£472 15 0
Hayden, heating and ventilation . . . . .	395 10 0
Shrewsbury Gaslight Co., gasfitting . . . . .	294 0 0
Lowe, glazing . . . . .	145 0 0

**SNARESBROOK.**

For Alterations and Repairs to the White House, Snarebrook, Essex, Private Residence of Mr. H. Prockter. Mr. EDWARD BROWN, Surveyor, Hanbury Street, Spitalfields.

BELCHER & ULLMER (accepted) . . . . .	£302 0 0
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**STAINES.**

For Building the Staines Infectious Hospital, for the Staines Joint Hospital Board. Mr. HAMPTON W. PRATT, Architect, 3 Furnival's Inn, Holborn, E.C. Quantities by Messrs. EVANS & DEACON, 1 Adelaide Street, Charing Cross, W.C.

**Buildings.**

Shillitoe, Upper Norwood . . . . .	£4,000 0 0
Brown, Southall . . . . .	3,995 0 0
Woodbridge, Maidenhead . . . . .	3,995 0 0
Jarrett, Croydon . . . . .	3,900 0 0
Lodge, Feltham . . . . .	3,900 0 0
Burrows & Co., Bedford . . . . .	3,898 0 0
Higgs, Loughborough Junction . . . . .	3,800 0 0
Turner, Watford . . . . .	3,737 0 0
Aldridge & Jenvey, Peckham . . . . .	3,697 10 0
Hardy, Croydon . . . . .	3,692 0 0
Hann & Co., Windsor . . . . .	3,660 0 0
Taylor, Uxbridge . . . . .	3,621 0 0
Reavell, Staines . . . . .	3,599 0 0
Avard, Maidstone . . . . .	3,590 0 0
Oades & Sons, Egham . . . . .	3,579 0 0
Triggs, Clapham . . . . .	3,632 0 0
Hiscock, Hounslow . . . . .	3,593 0 0
Peters, Horsham . . . . .	3,526 0 0
Maiden & Harper, Croydon . . . . .	3,523 0 0
Martin, Wells & Co., Aldershot . . . . .	3,482 0 0
Gibson, Southall . . . . .	3,445 0 0
Belch, Harmondsworth . . . . .	3,430 0 0
Priestley & Gurney, Camden Town . . . . .	3,409 0 0
Bottrill, Reading . . . . .	3,269 0 0
Bull, Sons & Co., Limited, London . . . . .	3,259 0 0
Groom, Rowland & Co., London . . . . .	3,112 0 0
Martin, Addlestone . . . . .	3,436 16 4

**Fencing.**

Woodbridge, Maidenhead . . . . .	£286 0 0
Taylor, Uxbridge . . . . .	273 0 0
Martin, Addlestone . . . . .	268 0 0
Oades & Sons, Egham . . . . .	248 0 0
Reavell, Staines . . . . .	245 0 0
Turner, Watford . . . . .	242 10 0
Avard, Maidstone . . . . .	242 0 0
Bottrill, Reading . . . . .	240 0 0
Gibson, Southall . . . . .	240 0 0
Hann & Co., Windsor . . . . .	240 0 0
Brown, Southall . . . . .	230 0 6
Belch, Harmondsworth . . . . .	230 0 0
Hardy, Croydon . . . . .	228 0 0
Shillitoe, Upper Norwood . . . . .	214 0 0
Lodge, Feltham . . . . .	213 0 0
Bull, Sons & Co., Limited, London . . . . .	210 0 0
Aldridge & Jenvey, Peckham . . . . .	209 5 0
Burchell & Co., Bedford . . . . .	205 0 0
Higgs, Loughborough Junction . . . . .	200 0 0
Maiden & Harper, Croydon . . . . .	200 0 0
Martin, Wells & Co., Aldershot . . . . .	200 0 0
Groom, Rowland & Co., London . . . . .	197 0 0
Triggs, Clapham . . . . .	190 0 0
Peters, Horsham . . . . .	173 0 0
Hiscock, Hounslow . . . . .	172 0 0
Priestley & Gurney, Camden Town . . . . .	160 0 0

**STAMFORD HILL.**

For Building Six Cottages in Bailey's Lane, Stamford Hill, for Mr. A. Sanders. Mr. EDWARD BROWN, Architect, Hanbury Street, Spitalfields.

CHRISTOFFER (accepted) . . . . .	£990 0 0
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**STREATLEY.**

For Alterations and Additions to The Coombe, Streatley, for Mr. E. Gibbons. Mr. W. RAVENSCROFT, Architect, Reading.

SMALLBONE (accepted) . . . . .	£550 0 0
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SOUTHPORT.

For Cemetery Extension, Southport. Mr. W. CRABTREE, Borough Surveyor.

Contract No. 1.

Lomax, Eccles	£2,602 18 9
Oates, Halifax	2,001 4 11
Macleod & Co.	1,700 0 0
Bloomfield, Southport	1,320 9 8
G. & J. Foote, Bury	1,311 12 10
Fawks Bros., Southport	1,275 14 9
HARLING, Southport (accepted)	1,170 0 0

Contract No. 2.

Lomax, Eccles	1,093 5 0
Oates, Halifax	819 18 0
Macleod & Co.	690 0 0
Bloomfield, Southport	541 19 0
G. & J. Foote, Bury	533 3 0
Fawks Bros., Southport	517 12 0
HARLING, Southport (accepted)	479 0 0

STONEY STANTON.

For Alterations and Additions to Farm Homestead, Stoney Stanton, for Messrs. J. & T. Spencer. Messrs. HARDING & TOPPITT, Architects, Leicester. Quantities by the Architects.

Ridditt, Leicester	£385 0 0
Cook, Broughton (accepted)	369 0 0
J. & W. Harrold, Hinckley	357 17 6
Cox, Leicester	356 0 0
Norton, Stoney Stanton	355 0 0
Rudkin, Leicester	354 10 0

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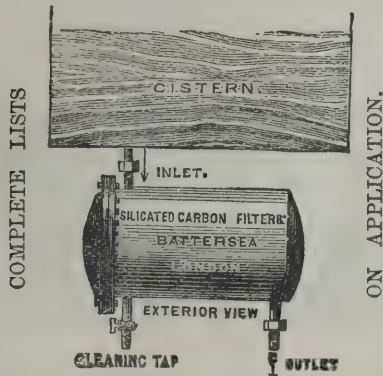
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TULLYNESSELE.

For remainder of Steading of Offices on the Farm of Cairness, Tullynessele, N.B.

Accepted Tenders.

Ross, Alford, mason	£120 0 0
McDonald, Keig, carpenter	85 5 0
W. & J. Christie, Dyce, slater	47 10 0

TWICKENHAM.

For Widening and Making-up part of Amyand Park Road and Crown Road, St. Margaret's, Twickenham, for the United Counties Land, Building, and Investment Society. Mr. ROBT. L. CURTIS, Surveyor. Quantities by Messrs. R. L. CURTIS & SONS.

Jackson	£2,184 0 0
Pound	2,098 0 0
Atkins	2,035 0 0
Pizzey	1,990 10 0
Beadle	1,945 0 0
Cooke	1,927 0 0
Nicholls	1,909 15 0
Bryant	1,868 0 0
Messum	1,831 0 0
Iles	1,800 0 0
Hare	1,778 14 0
Potter	1,760 0 0
Carter	1,704 0 0
Noel & Co.	1,700 0 0
Trueman	1,630 0 0
SAUNDERS (accepted)	1,489 1 6

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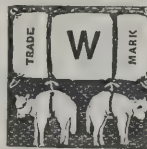
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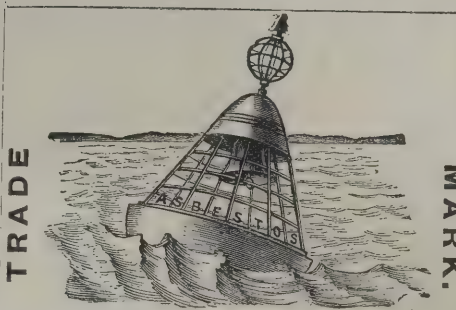
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# The Architect.

## ART INACCESSIBLE.



THE "joy for ever" produced by works of fine art may be said to be appreciated by three classes of the community, separately considered. First we have the few—we must speak of them vaguely—who are "cultured." Then we have the many who are capable of becoming cultured. Lastly we have the multitude not capable of becoming cultured. This classification does not correspond with the ordinary division of the population of the country into the upper, the middle, and the lower orders; neither is it identical

with any comparison between the more educated, the less educated, and the uneducated; or even the rich, the well-to-do, and the poor.

Culture, notwithstanding the disputed meaning of the term in itself, seems to be most generally intended to refer to something like an artistic faculty—a literary faculty is the same thing—which has been brought into critical or practical form by a special study of artistic—or literary—productions. A pure mathematician, for instance, or an eminent engineer, or even a distinguished physician or lawyer, we should hesitate to call a man of culture *ex officio*; he is a man of much knowledge, but he may be wholly devoid of those characteristics of what is called an accomplished man which seem to be also looked for in people of culture—most of whom are so ignorant of science, indeed, that it might be almost said the more the culture, as cultured people themselves understand it, the less the science, as scientific people understand that.

The cultured class, then, in this view of the case, is composed of all those who are artists by profession, or amateurs in the widest sense of the term, or people of taste, that is to say, admirers of artistic work—literary work being still the same—with a certain intelligent understanding of its aims and ends which the multitude do not arrive at by instinct or any kind of inner consciousness.

In England up to this time there are many of the better classes who make no pretensions to the possession of taste; and it must be added that there are still more who do make pretensions, but without much reason, beyond the acknowledged fact, for what it is worth, that they are purchasers of "things they like." It is a great gratification, however, to those whose interest in the arts is based on a better foundation, to be able to believe that the numbers of the well-meaning people who are behind the age in these ways are now every day decreasing. It is not to them that art is inaccessible, and they are learning more and more to enjoy it.

Apart from those to whom wealth offers a short cut to the enjoyment of art, the mass of cultured people seem to find their way to it nowadays on the whole pretty readily, and the sum total of refined pleasure which is produced daily throughout the land—and a daily augmenting sum total—is not easily overestimated. Public examples of art of every kind are being multiplied. Artistic exhibitions are becoming, not only more numerous, but of higher quality; and they are being introduced in new quarters everywhere. Private collections, from the most ambitious to the most unpretending, are acquiring a steadily-increasing value. Last not least, the shops, mere tradesmen's shops, for the sale of genuinely artistic objects and ornaments, are perhaps twenty to one compared with what they used to be, and no longer in London only, but in all towns of importance. Art, therefore, is still sufficiently accessible so far. It may be said, in a word, that the cultured classes of English people can at the present moment get a sufficiency of it anywhere for all reasonable wishes; those who can afford it may spend their money as freely as they please and as well as they know how, and those who cannot are not on that account deprived of the opportunity of keeping the artistic faculty pretty fairly busy.

But when we look at the far larger mass of rich and well-to-do English people whose knowledge of the joys of art is so limited as to be scarcely discernible, what we have to consider with regard to them is the question how to open their eyes and

thereby create the desires of taste. The answer to such a question is much more easy than might appear. "Pretty things" are pleasant to all; in fact, "prettiness" of the artificial kind is but the result of "investing with artistic merit" the primary commonplaces of life. The dullest dunderhead in existence recognises what he calls a pretty thing; the very baby loves it. The elevation of the great dead level of humanity to the appreciation of beauty of a higher and still higher order is the advancement of the public taste everywhere. What, then, is the first practical consideration here? Money.

By money we mean, of course, the price of artistic commodities; and here it is that we perceive the cause of art being so often inaccessible—inaccessible, that is, to those whose native desire for it is too sluggish to make them seek it earnestly. Cheap art, in other words, in these days when the activity of intelligence so frequently takes the place of the fire of genius, is the key to the problem how to promote the spread of art, as we are accustomed to say—how to constrain the callous to become sensitive to the divine influences of it, how to create, or at least develop, the generous passion for it.

To take a case, the simplest of all the products of art of the more important kind are the works of the sculptor; a portrait bust, that is to say, is a more unsophisticated portrait in the eyes of most people than a portrait picture, and a piece of statuary a more universally appreciable thing than a corresponding painting. We do not, however, draw this comparison for any other reason than to inquire why our sculptors should demand such high prices for their work. The question is somewhat emphasised, indeed, by certain occurrences of recent notoriety. The professional assistant has come to be a well understood functionary in the sculptor's studio—we do not mean the pointer, but the modeller—and, if tales had been told out of school a little more freely, the vulgar world might have heard of the modelling being even "put out," to be done at a very humble workshop, and nobody made the wiser. Why, then, is it necessary that a small work of the sculptor's art should cost hundreds, and a large one sometimes thousands? It is not always easy to understand why counsel's retainers run up as they do; or why a popular doctor should get such liberal fees as to be able to reject any less expensive honour than a hereditary baronetcy; but when an everyday modeller fails to persuade himself to exercise his art for such prices as people can afford, and prefers, if we may speak plainly, to work for amusement, or even stand absolutely idle, rather than earn two or three guineas a day all the year round—as hundreds might do in England, and hundreds would be only too glad to do in France and Italy, and still keep up to the highest standard of art—surely such etiquette is not only a great blunder on the part of the individuals who practise it, but a much more serious loss to the community at large who lose by it.

This is an illustration, therefore, of art inaccessible; and it is well known that we need not stop at the sculptor if it were desirable to pursue the case further. Our proposition is that the doctrine of cheap art being inferior and unworthy art is an utterly fallacious doctrine, and that, on the contrary, it is artificially dear art that is a commercial blunder—and none the less an artistic mistake. Let art, good art, the best art, be produced cheaply, and the great dead level of the public mind rises to the attraction instantly. To esteem a work of art only by the money paid for it is on the face of the thing to apply the most vulgar of all tests; and now that cotton-spinners are the buyers, not to keep but to sell to other cotton-spinners at a profit when "the market has risen," surely those who have the great traditions of the arts in their keeping must blush rather than smile in their sleeve. It is, however, one of the most remarkable traits of the present day. No matter how much delight a picture is capable of diffusing, the owner regards it with discomfort if he have a misgiving that when judged by an auction-room standard the value of the work is decreasing. Nor is this surprising, when one so often finds that what good folks discuss is, not the beauty of the pictures they see at CHRISTIE'S, but the prices which have been realised.

The case of that remaining class of the people who are not, like the preceding class, directly capable of that culture which the appreciation of the superior orders of artistic effort requires, we need not now enter upon. Suffice it to say that the numerical increase of every high class of intelligence must happily involve the decrease of a lower class; and if cheap art



is at this moment a vital consideration with the great mass of the educated people of England, it is still cheaper art that is necessary for the still greater mass of the uneducated.

## STUDIOS IN ROME: MR. ELIHU VEDDER'S.

[BY A CORRESPONDENT.]

JUST outside of the Porta del Popolo, adjoining the Villa Borghese, is the rising ground which flanks the Flaminian Way, known as Monte Parioli. Its summit is occupied by a semi-cultivated garden and grounds, upon which a group of studios have been recently built. The situation is a beautiful one. It commands fine views of Rome, of the Tiber flowing under the Janiculan Hill and Monte Mario, and on the other side, the Campagna to the ranges of the Tusculan and Sabine Hills. There could be no more suitable spot for an artist to indulge his day dreams, or tranquilly give them a more substantial being on his canvas. One of this group of studios is occupied by Mr. VEDDER, an American painter known on both sides of the Atlantic as an imaginative artist of power and considerable individuality of character. He has been recently employed in illustrating the "Rubáiyát" of OMAR KHÁYYÁM, the astronomer-poet of Persia, whose quatrains are known to English readers in two translations, and appear to have a growing popularity. They are charged with an intense but significant materialism, whether the result of philosophical conclusion, or only worn as a garb to toy with his ignorance and perplexity in regard to the unknown, one can hardly tell. He dwells upon and enforces the pleasure of to-day, disregarding and banishing from his mind the past and the future. The wine-cup is his panacea for every ill, and the oblivion it bestows the satisfaction of every desire, the answer to every perplexity. Unlike SOCRATES, PLATO, MARCUS AURELIUS, and those high lives and noble thinkers who have sought to bestow order, purpose, and moral dignity upon life, OMAR KHÁYYÁM gives up its problems, resigns its struggles, and grasps the present with an eager hand, preferring forgetfulness to pain, the exaltation of a screening excitement to a contest with the difficulties which beset the spiritual life both within and without. With all this, however, there is a profound significance in his utterances. They deal with life and time, infinity and eternity, in a highly suggestive and significant manner. Mr. VEDDER has seized in a very powerful degree the semi-mystic sentiment of the poet, and the illustrations are a very worthy pendant to his verses. His designs are rendered with a firm hand in a frank and manly way, without any mawkishness or false sentimentality. In fact, they are impressed with the seriousness of an intellectual mind and a congenial thinker, who has given himself thoroughly and sincerely to his task.

Mr. VEDDER's series begins with a symbolical representation of the stream of existence arrested by a whirlpool for a moment, then once more flowing into the unknown infinite. An amphora and a spray of vine mark the moment of earthly life ere it is lost in oblivion. The opening of the poem is inaugurated by a drawing in which the Angel of Life withdraws a curtain from a reclining figure just wakening into being, as the personified sun rolls back the clouds of arising day. A shadowy form in the background indicates the still unawakened soul. Amongst the most charming of these designs is the succeeding one, illustrating the lines—

Now the new year reviving old desires,  
The thoughtful soul to solitude retires.

A sage sits reading underneath some trees, through which the morning light struggles: two deer standing beside a jar of water in the foreground. Very impressive, too, is the soul, represented as a female figure, called by premature death to descend the steps of the tomb. Her head is drooping, but her hair floats upwards as the earthly garment falls from her, and even the poppies of oblivion drop from her hand. Palm and wreath of fame or victory are laid aside as the lamp of life flickers, weaving a thin veil of smoke before the entrance to the dark dwelling. The fruitlessness of human study and research is shown by a skull which rests amongst many well-thumbed books upon theology, the upper part of the picture being occupied by the shadowy figures of the dead hopelessly entangled in cobwebs of confusion and perplexity, which even entangle the expired lamp that once enlightened them in their

studies. The poet's comparison of the soul's entrance into being with water flowing, whether it will or no, and its exit to the blowing of the wind, as compelled by a force greater than its own, finds illustration in two serious figures borne upon a visible current, the one floating against the dawn, feeling its first impulses of life; the other gathering up its garments for its passage out of it through a descent of gloom and darkness. The poet's continual appeal to the wine-cup receives many illustrations. The first of these is marked with much seriousness. The poet raises the cup to his lips, his eyes fixed in a deep speculation as he gazes into the mystery of life. Not less beautiful is that in which the minister of wine, a graceful female figure, presents the cup to the poet, as he stoops to kiss her whilst receiving it. Still more impressive is the design in which the angel of death, gloomy and serious, is represented standing by the dark, sedge-grown brink of a stream, offering a cup to the lips of a drooping figure, with closed eyes and relaxed frame, who is fainting over the proffered draught, the sun sullenly setting in the background. With a character quite its own, Mr. VEDDER has here given us a design which in significance, seriousness, and vividness of conception partakes of the quality of the seer. The question of suicide is answered in the drawing by a figure lying on the ground, from beneath which the blood trickles as the dimly-seen soul floats upwards, lost in the gloomy region of the blurred stars, a lamenter going by on crutches looking wistfully at the corpse. Impressive, too, is the procession of the beings of Time under the rule of Death, who plays their march of progress on the pipe, and the sphinx who sits on the fossilised fauna and flora of the past, mixed with the wrecks of human existence. The divorce of Reason and the wedding of the Daughter of the Vine is conceived and expressed with the force and firmness of the antique. In the same manner the poet's draught at the tavern door, the disputes of the "two-and-seventy jarring sects," and his contempt for Science, who stands with a pair of calipers—the measure of within and without—in her hand, as he plays upon a musical instrument with indifference, are treated with remarkable energy and vigour. The latter of these illustrates the verse in which the poet expresses scorn of his own labour in having reduced the calendar to a better reckoning, alleging that it was only striking from it "the unborn-to-morrow and dead yesterday." Very significant is the youth representing the Present listening to the voices of the Past, the shades of the blessed dead appearing like a dawn in the upper part of the picture, whilst others below are dimly seen through pale flames and falling leaves which bestrew the page. The soul's passage through the "Invisible" in search of some indications of the after-life is striking and remarkable. In the upper corner we have the spirit beatified in its own sun-like radiance; in the lower one a face surrounded with billowy flames, "the shadow of the soul on fire." Suggestive also is the design representing the stream of life, emerging from and vanishing into oblivious darkness, the smoke of the wine-cup blurring its most brightly-illuminated point with an obscuring veil. But probably Mr. VEDDER's originality and peculiar power culminate in the design which represents the Fates—spindle, distaff, and shears laid aside at the end of all things, drawing in a streaming net the heavenly spheres, and laying them aside, the expiring embers of effete universes.

But it would be impossible to go all through these remarkable designs with full particularity. It may be enough to mention some of the most noteworthy ones: the Last Man standing on a world of skulls, the serpent of evil at his ear, Love lying dead at his feet; the bowed female figure and a second standing upon a serpent remonstrating with the Supreme Judge; the sage's contemplation in the potter's warehouse; the change from youth to age, in which a blithesome shepherdess spins a thread, which in another compartment Age takes up listlessly in the winter of life, now that her "spinning is all done;" last of all, we have the grave of the poet marked by a slab on which is sculptured the symbol of a broken lute placed upon the emblems of a lifetime, overhung by the branches of a grape-laden vine; and, finally, as a tail piece, a female figure who places on the flowers of his grave, flanked with poppies, a reversed wine-cup in fulfilment of the poet's last request. Other designs enter into the compositions: a bird singing on a skull; the broken rose of pleasure leaving its faded petals on the stream of Time; the Pleiades threading the stars upon a line—all of them highly suggestive.

Whether these drawings be looked upon from the imaginative or constructive point of view they are alike remarkable,



exhibiting wonderful fertility and skill. They embody a largeness of conception and a vigour of treatment characteristic of the most robust schools. Mr. VEDDER has brought to the task of illustrating the work of the philosopher-poet almost as much as he has found there. His illustrations do not follow the text with a slavish literalism; nor are they the result of the factitious disposition of a few studio models; but they are of themselves creative works bearing the stamp of strong individuality of character. It may be predicted of them that they will be received by all thoughtful lovers of earnest art with a warm welcome. We believe that they are to receive their first publication in America, where they will be reproduced in facsimile.

### MEDIÆVAL BUILDING.

AMONG the results of the investigations of the Royal Commission on Historical Manuscripts will be some increase in our knowledge of the conditions under which building was carried out in Mediæval times. A great many documents must exist in the record rooms of cathedrals, in municipal offices, in vestries, and even in private mansions, which would throw a light on the subject. Hitherto they have been neglected, but the systematic course adopted by the officers of the commission will be the means of extracting all information contained in the documents. It is not too much to anticipate that in course of time more will be known with certainty regarding such debated subjects as the relation between the master of the works and the workmen. But to attain this end it would be an advantage if an architect, who had made archæology a study, could be attached in some way to the commission. It is evident from the reports that there are expressions in the documents which puzzle the writers of the abstracts, but which might present no difficulty to an expert.

One of the contract deeds belonging to the Dean and Chapter of St. Paul's dates from July 11, 1348, in the reign of EDWARD III. THOMAS RYKELYNG, a stone-mason, agreed to pull down the walls of the chancel of the Church of Sandon, and to rebuild them on the old foundation to a height of 17 feet at the two sides. There was to be a window in the east wall which was to contain three divisions called "dayes," and each side wall was to have a similar window, but having two instead of three "dayes." At each of the two chief angles there was to be a buttress 5 feet in breadth and  $1\frac{1}{2}$  in thickness, and a buttress of like size in each of the side walls. There was to be a suitable door on the south side. The mason was to be paid twenty marks for his work, and to receive the stone of the chancel.

A deed which is drawn up in French, dated April 7, 1369, is most elaborate, and suggests the skill of CHAUCER'S sergeant, who could "make a thing that coulede no wight pinch at his writing." The parties are the Dean and Chapter of St. Paul's on one side, and ROGER FRAUNKELEYN and JOHN PAGE on the other. The work to be done was at Peterborough. The following is an abstract of the specification:—

Twenty houses are to be built as shops towards the high road, between the first two of which on the east towards the north there shall be a gate with a wicket in it made of old heart of oak. The rest of the work is to be made of new timber of heart of oak. All the windows towards the high road are to have good lintels and to be of one sort, except that at the corner in the east there shall be two fair bay windows. There are to be twenty gables towards the east and west. All the houses are to be of the same width as the existing cellar. In each of them there shall be an entreclos reaching from the ground to the summit, with good steps giving easy access to the different chambers. There are to be "pes des tables" of heart of oak lengthways in every house, and suitable benches in the halls. The carpenters are to provide planks of heart of oak, and to make all the doors and windows of tables of "estland," and the remainder of the tables in solars and in gutters alike of "planches bord" of heart of oak. All the plates in front are to measure 7 inches in thickness and 12 inches in breadth, and all those behind 6 inches in thickness and 12 inches in breadth. The principal studs of the first floor are to be 12 inches in breadth and 9 inches in thickness. The first beam (bressummer) is to be 9 inches in thickness and 13 inches in breadth. The monials in the middle of the windows of the shops are to be 6 inches in thickness and 9 inches in breadth, to fit the thickness of the beam. The joists of the first floor are each to be 10 inches in breadth and 8 inches in thickness. Moreover, the "coiffetre" which shall be between the said "joists" is to be  $5\frac{1}{2}$  inches in thickness and  $7\frac{1}{2}$  inches in breadth, and the studs over it are to be 9 inches in breadth and 7 inches in thickness.

The window studs are to be in proportion. The joists of the cellar are to be 12 inches in breadth and 10 inches in thickness. The principal posts of the building are to be 14 inches in breadth and 12 inches in thickness near the ground, and 12 inches in breadth and 10 inches in thickness at the top. The "entreteys" between the posts are to be 10 inches in breadth and 9 inches in thickness, and the "resnes des resnes" of all the houses 10 inches in breadth and 8 inches in thickness. All the rafters are to be 6 inches in breadth and 5 inches in thickness at the foot, and 5 inches in breadth and 4 inches in thickness at the top. The "lyernes" are to be 6 inches in thickness and 8 inches in breadth. The work is to be completed within two years of the next Michaelmas, and the sum of 303*l.* sterling or in gold is to be paid to the carpenters in instalments.

There is a third contract, which was entered into in 1371. PETER DE WEBBENHAM, a mason, of London (who may have worked under CHAUCER), undertook to carry out the masonry for eighteen new shops, which were to be erected at "Powles-brewerne." The size of each shop was 11 feet by 25 feet. One wall was to be 2 feet thick up to the level of the "gystes" or joists. Foundation-walls were to be carried from one wall to another for the "entercloses," while others were to carry "les principales postes." There were to be ten stone "puttes" for "preves," of which eight shall be double, and each 10 feet in depth. The ten chimneys were to be each  $5\frac{1}{2}$  feet in width between "les jambes," eight were to be double, and made "desus dez mantles de Flandrisch tyle et desouth lez mantles de perez et tylesherd." The Dean and Chapter on their part undertook to provide all the stone, lime, hurdles, &c., except "les Flandrysch tyles et plaster pour lez mantelschides des avaunt ditz chemeneyes" and to pay fifty marks, and "une cote et une chaprone del lever de Evesge del jour dez Innocentz." In those days Norman French was the language of law deeds, but there is not much difficulty in interpreting the conditions. Dutch tiles were apparently as much esteemed in the fourteenth as in the eighteenth century, and the mason was allowed to purchase them, while the Dean and Chapter supplied materials which were obtained from their own lands. In addition to the money there was to be a present of a fur hood. It deserves to be noted that there is no mention of any superintendent in this deed.

Another contract for the erection of shops, this time in Friday Street, is dated August 20, 1410. The contractors were JOHN MORE, a timbermonger, and JOHN GERARD, a carpenter. There is a mixture of English and French words in the deed. The three shops were to have three "stalles" and three "entreclos" on the ground floor, with cellars below. On the first floor each house was to have "une sale, une spence et une cusyne," and in each "sale" were to be "benches et speres." The second floor was to be divided into "une princपाल chambre, une drawingy chamber, et une forein," and was to have "une seyling pece." Each house was to have two "esteires." The height from the ground to the "gistes del primer flore" was to be ten feet and a half, the first floor was to be nine feet high, and the second to be eight feet. In this case there was a plan on parchment, which is referred to in describing the gables towards the street on the east. The doors and windows were to be made of "estricche bord."

Belonging to the same reign is a contract entered into with JOHN DOBSON, a carpenter, for building houses in Bucklersbury. In it mention is made of a "sotel house," an alley, a "garet," two "bay wyndowes," a "parlera," a great cellar, a "warehous," a hall with an "upryght roof," two lintelled windows of two bays, a "tresauce" full of windows in the hall, an "oryell" with a step to give light to the pantry and "botillery" at the east end of the hall, a stable, a "colehous," and a "wodehous." The houses evidently were of a superior class, worthy to exist in a street wherein were "the manor and tenements pertaining to one BUCKLE who there dwelt and kept his courts."

### PARIS NOTES.

DURING the past week the official programme has been issued of the National Triennial Exhibition of the works of living artists to be held at the Palais de l'Industrie in the Champs Elysées from May 1 to June 15, 1886. The works of foreign as well as of French artists will be admitted; but all those that have appeared at the Salon or other annual exhibitions previous to 1878, at universal exhibitions, or at the National Triennial one of last



year, besides all copies or other reproductions—however much the style may differ from the original—will be rigorously excluded. Only 750 works will be admitted in the first section, to comprise 600 oil paintings and 150 water-colours, sketches, &c.; in the section of sculpture the exhibits are limited to 300, in architecture to 40, and in engraving to 100. All works must be sent in and registered between March 5 and 15, from ten to six each day, at the Palais de l'Industrie. There will be absolutely no *hors-concours*, so that every work admitted will have to be passed by the jury, about one-half of which are to be selected by the Académie des Beaux-Arts from among its own members, an equal number being nominated by the Minister of Public Instruction and Fine Arts, while the Minister himself, the Director of the National Museums, the Conservator of the Luxembourg, and the honorary Directors of Fine Arts will be *de officio* members. The jury is to be divided into four sub-committees, one for each section, and each of these will receive various *de officio* members, such as the Conservators of Paintings and Drawings at the Louvre Museum for the painting section, the Conservator of Modern Sculpture at the same museum for the sculpture section, the Director of Public Buildings in architecture, and the Conservator of Stamps at the National Library in engraving. The hanging and disposition of the exhibits will be done by the administration.

The Salon Jury of Painting have elected M. Bouguereau, president; MM. Cabanel, Bonnat, and Busson, vice-presidents; MM. de Vuillefroy, Tony Robert-Fleury, Humbert, and Guillemet, secretaries. Three members of the forty—MM. Baudry, Jules Breton, and de Neuville—having declined to act, their places have been taken by MM. Renouf, Bastien-Lepage, and Van Marck, the first on the list of supplementary jurors. The number of paintings sent in exceeds by 600 those of last year; there are rather fewer drawings and enamels, but the total in the section reaches nearly 6,000. As by the regulations only 2,500 of these can be admitted, and at its first sitting the jury has already passed 562 works from artists exempt as *hors-concours* from examination for admission, less than one-third of the works sent in can be received, and the number of the disappointed must necessarily be greater even than ever. In order to preclude any suspicion of partiality, the examination is being conducted by the jury according to the strict alphabetical order of the artists' names.

Among notable painters who have sent nothing to the Salon this year are M. Meissonnier, who is preparing a private exhibition of his own works; M. Eugène Lavielle, the painter of night scenes of nature; M. Georges Bertrand, who painted *Patrie*; MM. Cazin, Bouvin, and Ferdinand Chaigneau.

MM. Thiebaut, the founders, have completed a splendid reproduction of M. Falguière's statue of *Gambetta*, which is now being exhibited in Paris previous to its inauguration at Cahors next month. The sculptor has been happily inspired. The statesman is represented in his fur-lined overcoat, his right hand resting on a broken piece of cannon, and his feet among broken swords and muskets, the unmistakable signs of national defence, and his whole attitude is one becoming the great leader and orator who never despaired of his country's destinies. The figure stands nearly 11 feet in height, and weighs about 3 tons, being cast in solid bronze.

At its last sitting the Académie des Beaux-Arts elected M. Duphot, of Bordeaux, as corresponding member of the section of Architecture, in place of M. Chenavard, deceased. During the same meeting the committee of the Sculpture section presented to the Academy its list of candidates recommended for the vacant seat in that section. This list is not long, only including two names, those of MM. Mercié and Barrias—certainly the most distinguished of the younger French sculptors. M. Barrias is only forty-three, and M. Mercié barely thirty-nine years of age. The Academy has just received another valuable legacy. A M. Brizard has left an endowment of 3,000 frs. per year to found an annual prize to be awarded to some painter of a land or seascape in oils that has been admitted to the Salon of the year. The conditions of the bequest provide that the recipient must be of French nationality, of not more than twenty-eight years of age on the 1st of January preceding the Salon, and a winner of no prize higher than a 3rd medal.

The decoration of the Victoire de Samothrace Gallery, Daru staircase, at the Louvre, has just been commenced, under the direction of M. Lenepveu. It will consist of four ceiling panels in mosaic-work, illustrating:—(1) Greece, Egypt, and Syria; (2) Holland, Spain, and England; (3) Flanders, Italy, and Belgium; and (4) France—in the sixteenth, seventeenth, eighteenth, and the present century. One of the chief objects of the work, which is expected to take ten years in execution, is to reintroduce and encourage the pursuit of mosaic art in France. In furtherance of this, the Chambers have voted 25,000 frs. a year to the Atelier National de Mosaïque, under the direction of two Italian masters.

The works commenced three years ago at the Louvre, under the direction of M. Guillaume, the architect of the museum, for the strengthening and cleansing of the basements and cellars, have occasioned the discovery of the south-east and south-west towers of the old fortress of Philip-Augustus, the site of which had hitherto been placed on the river-bank, just above the space now occupied by the Jardin de l'Infante. This portion of the old Louvre, as well as a hall with two naves and a central pillar, some ruined walls, brackets with sculptured heads, the remains of the curious drain which crossed the court of Francis I., and emptied into the Seine after passing under what is now Room No. 4 of the Venus de Milo Gallery, a stone sculptured with the knife representing a trumpet of the time of Charles IX. and bearing date 1567, a cistern, and other curiosities have all been carefully preserved, and will be exhibited permanently in the basement, which will shortly be thrown open to the public.

The death is announced, at the age of sixty-two, of Adolphe Aze, a painter who during the Empire attained considerable celebrity. He was a pupil of Robert-Fleury, and, while still under thirty, achieved sudden fame with his remarkable work *Diana surprised by Endymion*. This obtained him a second-class medal in 1851, and in 1863 he was placed amongst the *hors-concours*. For upwards of ten years he had been totally incapacitated from work by paralysis.

The friends of M. Ribot, the painter, whose reputation among his professional brethren and connoisseurs, is perhaps even greater than with the general public, gave a dinner at the Continental Hotel on Saturday last to celebrate his recovery from a protracted illness. M. Eugene Boudin, the marine painter, presided, and the guests numbered 150, among them being MM. Bardoux, Under-Secretary of State; M. Kaempfen, Director of Fine Arts; Antonin Proust, ex-Minister; and many other celebrities in the art world.

## EDINBURGH ARCHITECTURAL ASSOCIATION.

ON Saturday afternoon a party of about seventy members of the Edinburgh Architectural Association visited Prestonfield House, Craigmillar Castle, and Peffermill, the permission to inspect which had been kindly granted them beforehand. Conducted by Mr. Thomas Ross, one of the members of council of the Association, the party first visited Prestonfield House, where they were much interested in the "heather room," and the old drawing-room, which has a quaintly grotesque ceiling, and contains a recess behind the wainscoting in which Prince Charles is said to have concealed himself. It was also explained that the Marquis of Lorne was born in this apartment. Several letters of a private nature were read by permission, and from these an interesting record was obtained of the details and construction of the present building.—its predecessor having been maliciously destroyed by fire on January 11, 1681, when its then owner (Sir James Dick) was from home.

Having, on the motion of Mr. Russell, returned their thanks to the proprietor and tenant of Prestonfield, the members subsequently made an inspection of Peffermill House, which is three storeys in height, with attics, and is on the L plan, with a circular staircase at the re-entering angle. The building is long, high, and narrow, each room extending the full width of the house, and all entering through each other. The kitchen is on the ground-floor, and, along with the room adjoining, is arched. A door alongside the fireplace admits to a small chamber behind it in the thickness of the wall. Possibly this is an alteration, and the whole space may have formed the original fireplace. The house was built by one Edgar—probably Edward Edgar—in 1636, as the date on one of the dormers indicates; and at that time, and for about a century before, the lands of Peffermyle, in the barony of Craigmillar, belonged to the Edgars, an offshoot of the Edgars of



Wedderlie, in Berwickshire. Accordingly the arms of that family are carved over the beautiful entrance doorway.

The party afterwards proceeded to Craigmillar Castle, of which the following particulars were read to the company:—The castle consists of an old Scottish keep of a style to be found all through the country, and to which extensive additions have been made at later times, until the whole has grown to be one of the large-sized castles of Scotland. The keep stands on the edge of a cliff about twenty feet high, and is so near the edge that there is scanty room left for access to the door, while at some parts a foothold on the top of the rock is all that can be obtained. Immediately in front of the door a cutting made in the rock almost severs the path, and before the additions to the castle changed the aspect of affairs at this point, this cutting must have made the castle almost impregnable. The doorway, which looks to the west, is round-headed, and surmounted by the Preston arms. It gives access to a small entrance hall from which two doors diverge—that on the left leading to the ground floor, and the one in front to the staircase. By the former you enter a small chamber in the thickness of the wall, from which you pass into the large chamber on the ground floor. This is vaulted, 17 feet 6 inches high, with an intermediate floor of wood. The under floor was divided by a partition wall into two apartments. The staircase leading to the great hall is on the corkscrew plan, and after going up for a couple of revolutions, or about 10 feet, it comes to a stop, and one is shunted to the right, on to another staircase, on which the ascent is continued. At the shunting point a door overlooks the entrance hall, and the shifting of the staircase to the side may have been done to give more room to men defending the castle in the event of the outer door being forced. The great hall is a noble apartment, 35 feet long by 20 feet 9 inches wide, and 24 feet 6 inches high to the apex of its pointed roof. The walls, which are of an average thickness of 9 feet, are pierced by windows on the north, south, and east, all provided with stone seats. The fireplace is a fine specimen of its kind, and is quite entire. The hall has been divided into two storeys, and the stone corbels for supporting the beams are painted. There is a small arched room off the hall known as Queen Mary's room. As usual, the stair leading to the top is not in continuation of the lower one, but is on the opposite side of the door and passage leading into the great hall. Ascending this stair, a door leads off to the floor over the hall, and another to an entresol room over Queen Mary's room. This is a very beautiful apartment, and adjoining it is a most complete garderobe. The main roof, almost entire, is very flat, and covered with overlapping stones, the under stone being wrought with a groove along the sides of its upper surface. Two rows thus wrought were laid in their sloping position, with a space between for the overlapping stones, which extended over the grooves, the object being that rain blown in beneath the edges of the overlapping row would be caught in the groove, and thus run down to the carefully-formed gutter. The roof was doubtless constructed flat for the convenience of working military engines. The total height of the keep from the top of the rock is about 70 feet. The additions made at various times consisted first of a great curtain wall, of which the keep itself forms a part on the south, having angle towers, and enclosing a courtyard averaging 122 feet by 80 feet. Later, and at various times, within this courtyard buildings have been added against the curtain walls of the east, west, and south sides, having the entrance through the north curtain. Beyond this, on the east, west, and north, are other walls, strong and high, enclosing a space of about  $1\frac{1}{4}$  acre within the castle bounds; and within this space, again, various offices were built at different times. The curtain walls are about 28 feet high to the top of the parapet, and 5 feet thick. Inside the entrance doorway on either hand is an arched recess about 9 feet above the ground, each having a spy-window and stone seat for a sentinel. The east range of buildings is three storeys high, with a gloomy sunk floor at the south end, all vaulted except the upper floor. The beautiful entrance doorway in connection with this range superseded the old doorway to the keep, and in connection with it a wide turnpike led up to the great hall and the upper floors of the new wing. At the side of the new door, and in the thickness of the wall, a separate stair leads up to the kitchen, which has a large arched fireplace, stone sink with drain, and service window into the corridor leading to the great hall. From the floor above the kitchen, through the south-east tower, the east and north battlements are reached. These are supported on bold corbels with intervals between, through which stones could be thrown on an enemy approaching the base of the walls. In the centre of the south-east tower is a raised platform, reached by steps, from which shooters could send arrows over the heads of those defending the battlements. When the west wing came to be added, the west curtain was nearly all taken down and rebuilt, as it is seen now, with windows and chimneys, and without the machicolations. This was the latest addition made to the castle. It is two storeys high, with vaults at the south end. The rooms are large and handsome, entering through each other, as was the style of the seventeenth century. This was evidently the family side, with its separate entrance from the courtyard, now kitchen, dining-room, and private bedrooms. The dining-room has a beautiful fireplace, once lined with Dutch tiles, and a window with mullion and transom. From the bowling-

green, immediately outside this range of buildings, a flight of steps led down to the gardens at the lower level, where the bed of the fish-pond can still be seen. Between the east curtain and the outside wall is a small roofless chapel, measuring within the walls 30 feet by 14 feet 9 inches. Except that the gables have crow-steps, the chapel is very much in the style of the late Perpendicular work of England. The large ivy-covered building at the west end was a Protestant Presbyterian meeting-house, erected upon the indulgence granted by James VI. It was probably one of the barns or offices of the castle, and turned to this purpose. All writers on Craigmillar refer to the arms of the Cockburns, Congaltons, Mowbrays, and Otterburns, as adorning the walls of the castle. None of these are there now; nor any other arms except the royal arms, which surmount the Preston arms over the entrance, and again over a door leading out to the south battlements, and the Preston arms, which occur four times. Craigmillar came into the possession of the Prestons in 1374, and remained their property for almost three hundred years. As is evident from its style, the keep was built about the early part of the fifteenth century, and the curtain walls shortly after. In 1543 it was taken by Hertford and much demolished; and probably the buildings inside the east curtain wall were built shortly after that time, and perhaps part of the west wing also, although it was undoubtedly altered and enlarged in the seventeenth century by the Gilmours, who became possessed of the castle about that time. The chapel is of fifteenth-century work, and the outer walls were probably built after the English invasion.

Previous to taking their departure, the members, on the motion of Professor Baldwin Brown, awarded a vote of thanks to Mr. Little Gilmour, the proprietor of Craigmillar.

### THE LATE MR. WILLIAM HUGGINS.

THE death has been announced in many quarters of Mr. Wm. Huggins, animal and historical painter, remarkable for his versatility and fidelity to nature. There is a branch of art in which he also excelled which peculiarly entitles him to attention from an architectural journal—we mean his truthful rendering of ancient architecture, a class of subject most difficult in itself, and requiring in almost every respect a completely opposite mode of treatment, to which he was probably led by the influence of his brother, Mr. Samuel Huggins. Be this as it may, no man perhaps ever had a more profound feeling for the picturesque in architecture, or saw further into the world of beauty enshrined in old buildings by time, wind, rain, moss, lichen, and minute vegetation. What he saw and felt keenly he translated truthfully and vividly into art, and produced from time to time pathetic and elevating pictures, more especially during his residence in Chester, to which his strong love of the picturesque and beautiful of other days warmly attached him. Charmed with the venerable beauty and quaintness of the cathedral, he devoted much of his time to committing it to canvas in a very powerful and original manner, and executed *Chester Cathedral from the City Walls*. He also painted *The Ruins of St. John's, Chester*; *View from St. John's Churchyard*; and *A General View of Chester from the Far Side of the River*. All these and many other architectural subjects throughout Cheshire and Lancashire, among the former being *Bebington Church*, and on the banks of the Thames and elsewhere, were almost perfectly rendered by him. The "Huggins Gallery," which is to be formed at the forthcoming Art Loan Exhibition at Chester, will probably contain some specimens of this class of his productions.

### SIMPLICITY IN GREEK ART.

A LECTURE was lately delivered by Professor Waldstein, of Cambridge, to the members of the Literary and Philosophical Society of Leicester, on "Simplicity the chief characteristic of Greek Art." The lecturer remarked that he had set himself the aim, and it might be an ambitious one, of attempting to convey to them, in a comparatively short address, the chief characteristic features of an art which had been admired by all appreciators of the beautiful in all historical ages, and which had since formed the groundwork for the canons of modern taste. For the purpose of a succinct title he had chosen one attribute, which seemed to him the most salient and most distinctive belonging to the art of the Greeks. He might have done better if he had chosen the epigrammatic summing-up of the chief characteristics of the works of Greek art by the founder of the study, but it was its simplicity rather than its grandeur which he wished to show was inherent in the art of the Greeks. In speaking of simplicity as applied to people and things he meant that there was a right balance between all the parts—between the expression and the thing expressed. Aristotle, in attempting to define virtue and good, did it by means of the two opposing extremes, and in the middle, between the extremes, he found the good, the perfect, and the beautiful. Half-way between the opposite extremes of foolhardiness and cowardice lay courage, and between the extremes of niggardliness and



recklessness lay the best economy. So with people and the taste displayed in their surroundings. They would call a room or a house perfect in taste if, in the first instance, they were impressed with its thorough homelike feeling; and again it would be found if, in decorating their rooms, they always considered the means at disposal, the aim and object of the structure, the thing to be expressed, and the means they had of thus expressing it. In the same way in the expression of thought by means of words, they called that the most simple and natural form in which there was thorough harmony between the thing expressed and the means of expression. Perfection in all the manifestations of human thought and feelings, in all the creations of the human hand through the intellect and the heart, could only be found when there was that simplicity, that absolute harmony between the thing expressed and the means of expression. Then how was the artist, whose work was to take a definite form, and had to appeal to definite thoughts and emotions in the spectator, to find around which subject and problem that harmony was to group itself? In the first place he must turn to the study of the material he used—the language at his disposal for conveying those thoughts and suggesting those feelings. All arts were means of expressing human thoughts and feelings, and with a certain manipulative skill or verbal fluency they could convey by means of those agents almost any thought in a more or less perfect manner. But very often when, in the period of degraded taste, the skill and dexterity with which the technical craftsman had pinched and distorted the language at his disposal into a meaning not at all suited to his language, that skill was often admired by people as being one of the chief artistic merits of the work. But it was a total aberration of taste. An artist must study not only what he could possibly express by means of the material at disposal, but he must study those subjects best suited to be put into that material or language, and then there was the greatest chance of there being that complete harmony between the thing expressed and the expression, which was essential. Sculpture was the art in which the Greeks had more distinctly brought out the spirit of their national genius, and the remains of that art which had come down to us were numerous. But a sculptor had first to study the material language by means of which he was to express certain conceptions of the mind and certain feelings of the human heart, and he must never ignore the essential nature of that material, for if he did there would be discord between the language he used and the thing he expressed—there would be a want of simplicity, and the spectator would not be affected in that harmonious manner in which art ought always to impress them. The form the sculptor placed in his material should naturally suggest the chief characteristics of life and of the organic world. The chief characteristics of stone and metal were, first, that they were lasting and unalterable. Therefore the artist should produce, by means of his technical manipulation of the material, that illusion of form, that composition of the parts of the figure, which naturally and necessarily suggested the essential characteristics of the organic world, and of a living human figure, and see that there was no discord between the life that was placed in the statue and the material used. In Greek art they had what was called the archaic, or childhood period, and they had the period of decline, which began with the end of the fourth century and reached down to the Roman times. In the work belonging to both those periods they would notice, as the characteristic feature which marked it as being imperfect, the obtrusion of the material upon the senses of the spectators, counteracting the harmony between the thing expressed and the means of expression, and devoid of that supreme simplicity which marked their highest productions. In order to illustrate this the lecturer drew attention to specimens of sculpture of the early and later periods. In the first they were chiefly impressed with the difficulty which the artist had in producing what he required. In a later example of the period of transition to greater perfection, they had just a reminiscence of that constraint; whilst in the later specimens, of the period which marked the decline of Greek art, they had the characteristic of the most accurate study of the anatomy of the human figure. That presented itself so much that it was called the anatomical school. But anatomy was not the first study of art. The obtrusion of that skill in modelling, however perfect it might be in itself, was again to the detriment of that complete harmony which the artist ought to express. The spectator was carried away by the manipulative skill of the sculptor. The artist chose the most dramatic scenes from life, which were transient, and therefore absurd when set in bronze or marble. The attitude was momentary, whilst the material in which it was set was durable, and therefore the lack of harmony still prevailed. Between the two extreme schools that he had mentioned came the perfection of Greek art, and that was inseparably associated with the name of Phidias, born at the beginning of the fifth century B.C. Unfortunately not one of his great works had come down to them. But they had full accounts of all descriptions of his work by many authors, and from those they could form an idea of what his work was. The remains which had been preserved were from his designs, and mainly executed by his assistants, so that they had only a faint reflex of the greatness of his own art. But still there was hardly an artist, however eccentric, who would not say that never since that time to the present day had the same perfection

been attained. Professor Waldstein then described the sculpture and the mouldings of the eastern and western pediments of the Parthenon at Athens, the work of Phidias, of which he had sketches, going into details to show the breadth and perfectness of the conception and the harmony of feeling and mode of expression which was throughout it apparent. In this they had the characteristics belonging to the best of Greek art. However grand and noble the subjects were that Phidias chose for expression in the most lasting and monumental material, there was always that simplicity in the work which appealed to the meanest and most childlike understanding of the Greek mind. That was carried out in the whole composition, and not simply by one figure. The artist by every means at his disposal suggested, in the figures themselves and the lines of the composition, the great thought which he wished to convey to the simplest spectator. And not only in the composition, but in the subject, that complete harmony obtained between the means at his disposal and the thought he wished to convey, whilst in each separate figure they had the perfect power of model. In Phidias they had that simplicity which was required. In all his figures they felt that he had the power of representing just what he wished to represent, and that varied simplicity, that naïveté, and noble grandeur which characterised the works of the Greek.

### PRICES IN THE IRON TRADE.

THE return of Mr. Waterhouse, accountant to the Board of Arbitration for the Manufactured Iron Trade of the North of England was issued on Saturday. It gives the net selling prices of the leading classes of manufactured iron—viz., rails, plates, bars, and angles—for the first two months of the year. This return confirms the statement of the iron manufacturers, made at the late Arbitration Board meeting at Darlington, that prices of iron had seriously fallen this year. It also goes to show in a very marked manner the decline of trade, production being lessened. In the two months ending February 29 the production of all classes of manufactured iron amounted to only 90,616 tons, as against 109,220 tons in the two months ending December, and 117,365 tons in the previous two months ending October 31. A comparison of the returns shows that the falling-off of 27,000 tons in the output, as compared with the October return, is due altogether to the lessened demand for shipbuilding iron. Bars and rails have maintained their tonnage, but plates and angles are very much reduced. In the October return plates were 77,628 tons, in the December return 74,393, and in that just issued 60,874 tons. Angles have declined still more in proportion, for in the October statement they stood at 24,159 tons, in December 20,079 tons, and in February 14,050 tons. Bars stood for 15,215 tons in October, 14,227 tons in December, and 15,178 tons in February. In the matter of prices the trade wears an equally unsatisfactory aspect. In the October return plates were 6*l.* 3*s.* 2*d.* per ton, in December 5*l.* 19*s.* 11*d.*, and in February 5*l.* 14*s.* 7*d.* Bars in October stood at 6*l.* 3*s.* 11*d.*, in December at 6*l.* 0*s.* 5*d.*, and in February at 5*l.* 18*s.* 10*d.* per ton. Angles were 5*l.* 10*s.* at the first period, 5*l.* 9*s.* 1*d.* at the second, and are 5*l.* 3*s.* 8*d.* in the present return. Rails present only a few hundred tons production in each return, and the price does not vary so much as the other descriptions. The decline of 4*s.* 4*d.* in the last two months comes upon a previous reduction, taking the whole of last year of 10*s.* 7*d.* per ton, and gives for the fourteen months 14*s.* 11*d.* This return, showing so much depression in trade, and such a reduction in price since the present year commenced, cannot fail to have an important bearing upon the forthcoming arbitration, to be undertaken by Dr. R. S. Watson, upon the claim of the iron manufacturers for a reduction of 10 per cent. in wages.

### EDINBURGH CASTLE.

THE Cockburn Association have forwarded a memorial to the Marquis of Hartington, Secretary of State for War, on the restoration of Edinburgh Castle, in the course of which they say:—"The matter which your memorialists now respectfully desire to submit for your Lordship's consideration affects the amenity of the ancient Castle of Edinburgh. It is the restoration of the great Hall, in which the Scottish Parliament sat for a very long period prior to the erection of the present Parliament House in 1634. It is now used as a hospital, to provide the necessary space for which the original building has been subdivided by partitions, and by the insertion of two storeys between the floor and roof, with a staircase to give access thereto. The restoration of this ancient and beautiful Hall is a matter not merely of local but of national interest, and your memorialists are satisfied that its importance will be recognised by your Lordship. They understand that the work of restoration would be attended with little or no difficulty, and would meet with general approval if undertaken under the direction of the Government officers. The hospital accommodation which the



building now affords is of the poorest and most unsatisfactory nature, and your memorialists believe that better is urgently demanded, and might be otherwise supplied without any serious difficulty or expense. Were the hospital provided for elsewhere, the old *'Aula Castri'* of Scottish history, restored to its pristine beauty, and used for purposes of State festivity or recreation, might become once more a pride and honour, not merely to Edinburgh but to Scotland."

In some "Notes" on "The Parliament House of Edinburgh Castle," the Association say:—"This ancient hall is far more identified with Scottish historical events than the building now forming the vestibule of the Courts of Law, which dates only from the reign of Charles I. It was in the former edifice that, when they met in Edinburgh, the Estates were convened during most of the fifteenth and sixteenth centuries, and till the Tolbooth superseded the hall as the place of assemblage of Parliament. It was here that the hasty trial and condemnation of the sixth Earl of Douglas and his brother took place in 1440. It was here 'where Knox conferred with Grange and Lethington, where Charles I. held his coronation banquets, where Argyll feasted Cromwell.' . . . In the process of sub-dividing the hall certain struts have been removed; but the direction of the vacant mortises seems to afford a satisfactory clue to their position and a guide to the restoration of what is wanting. The roof-timbers are in good preservation, and are from their size and appearance presumably of foreign growth. Were an opportunity afforded for more careful examination by the erection of scaffolding, and were the partitions and floors cleared out and the walls stripped of the plaster, there can be no doubt that the original features of the building would be still more clearly discernible, and ample materials afforded for a faithful restoration."

### MR. W. E. LOCKHART'S DRAWINGS.

ON Saturday last, Mr. Dowell sold by auction, in Edinburgh, a collection of water-colour pictures by Mr. W. E. Lockhart, R.S.A., who is about to leave for London. The following were the principal prices:—

"The Town Hall, Crail," 15*l.* 15*s.*; "Church Interior, Majorca," 21*l.*; "The Last of the Old Pier, St. Monance," 32*l.* 11*s.*; "Moonlight on the Clyde," 15*l.* 15*s.*; "Cambuskenneth," 18*l.* 18*s.*; "A Harvest Field in Fife," 38*l.* 17*s.*; "The Last Haul of the Season," 18*l.* 18*s.*; "A Spanish Venta—Muleteers Departing," 52*l.* 10*s.*; "The Towers of St. Machar's, Aberdeen," 23*l.* 2*s.*; "A Clover Field in Fife," 17*l.* 6*s.* 6*d.*; "Harvest Time, Crail," 43*l.* 1*s.*; "Palace of the Duke of Montpensier, Seville," 21*l.*; "In the Highlands," 17*l.* 17*s.*; "St. Andrews," 23*l.* 2*s.*; "On the Forth, near Stirling," 36*l.* 15*s.*; "House in Granada where the Empress Eugenie was born," 25*l.* 4*s.*; "A Palace in Palma," 52*l.* 10*s.*; "A Farm in Fife," 25*l.* 14*s.* 6*d.*; "The Beacons of Crail," 27*l.* 6*s.*; "A Summer Day," 34*l.* 13*s.*; "Snow Scene from my Drawing-room Window," 28*l.* 7*s.*; "West Wemyss," 18*l.* 18*s.*; "Ford's Hospital, Coventry," 17*l.* 17*s.*; "Glengarry," 35*l.* 14*s.*; "Cowie, near Stonehaven," 42*l.*; "Cottages near the Borestone, Bannockburn," 33*l.* 17*s.*; "Street in Siena," 31*l.* 10*s.*; "Morning in St. Andrews Bay," 27*l.* 6*s.*; "A Rocky Shore," 15*l.* 15*s.*; "Stirling, from the Forth," 17*l.* 17*s.*; "Dunnottar Castle," 17*l.* 17*s.*; "In St. Andrews Harbour," 31*l.* 10*s.*; "Carting Seaweed," 18*l.* 18*s.*; "Alcala de los Panaderos, Spain," 21*l.*; "The Cottar's Hairst," 21*l.*; "Moorish Mills, Cordova, Spain," 21*l.*; "A Fishing Village," 52*l.* 10*s.*; "On the Seashore, St. Andrews Bay," 16*l.* 5*s.* 6*d.*; "Queensferry—Sunset," 15*l.* 15*s.*; "Glen Errochie—Sunset," 15*l.* 15*s.*; "A Fife Village," 15*l.* 15*s.*; "A Wet Day," 27*l.* 6*s.*; "The Funeral of Robert Burns," engraved, 73*l.* 10*s.*; "Dunblane—A Rainy Day," 37*l.* 16*s.*; "Dunstanborough Castle," 15*l.* 15*s.*; "Norham," 18*l.* 18*s.*; "The Gleaners," 16*l.* 16*s.*; "The Village of St. Ninians, Stirling Castle in the distance," 26*l.* 5*s.*; "An Old Scottish Harbour," 57*l.* 15*s.*; "Moorish Mills, Cordova, Spain," 29*l.* 8*s.*; "Breaking up the Wreck, Dunbar," 15*l.* 15*s.*; "The Poet's Rest, Stratford-on-Avon," 29*l.* 8*s.*; "The Towers of the Alhambra," 21*l.*; "A Calm Day off Corrie, Arran," 16*l.* 5*s.* 6*d.*; "Evening," 21*l.*; "Don Quixote at the Puppet Show," 126*l.*; "Stonehaven—Early Morning, the boats coming in," 26*l.* 15*s.* 6*d.*; "At the Window, Andalusia," 16*l.* 16*s.*; "Warkworth," 32*l.* 11*s.*; "A Baptism in San Giovanni, Siena," 89*l.* 5*s.*; "Kenilworth," 25*l.* 4*s.*; "The Duke of Wellington's Trees, Alhambra," 15*l.* 15*s.*; "Berwick-on-Tweed," 33*l.* 12*s.*; "The High Street, Crail," 31*l.* 10*s.*; "The Piazza del Annunziata, Florence," 48*l.* 17*s.*; "Warkworth, looking up the River," 29*l.* 8*s.*; "A Turnip Field, Crail," 22*l.* 1*s.*; "Spanish Beggars," 21*l.*; "Staircase in Lord Provost Ure's House," 27*l.* 6*s.*; "A Quiet Fisher Village," 17*l.* 17*s.*; "An Orange Grove, Majorca," 27*l.* 6*s.*; "The Salmon Nets, Crail," 21*l.*; "Holy Island Church," 17*l.* 17*s.*; "The Alhambra, Granada," 44*l.* 2*s.*; "San Telmo, Seville," 15*l.* 15*s.*; "Dunblane Cathedral," 26*l.* 5*s.*; "Sunny Hours," 23*l.* 2*s.*; "In an old Moorish Patio, Granada," 35*l.* 4*s.*; "His Eminence" (painting in oil), 75*l.* 12*s.*; "Itálica (Spain), the Birthplace of the Emperor Trajan," 21*l.*; "A Spate on the Garry" (painting in oil), 23*l.* 12*s.* Paintings by other artists (the property of Mr. Lockhart):—"Aberdour Castle," by Sam Bough, R.S.A., 18*l.* 18*s.*; "The Cattle Shed," by David

Cox, R.A., 42*l.*; "The Iron Spire—Rouen Cathedral," by Jules Lessore, 15*l.* 15*s.*; and "Dutch Canal Scene," by James Maris, 31*l.* 10*s.*

### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

A MEETING of the Birmingham Architectural Association was held on Tuesday, Mr. W. H. Kendrick in the chair, when a paper was read by Mr. Franklin Cross (hon. sec.), upon "John Henry Chamberlain and Architecture." The author of the paper discussed generally the principles and spirit of the work of the late Mr. J. H. Chamberlain as an architect and as an artist, and while highly praising the beauty of detail which it displayed, urged that it was wanting in rhythm and coherency between the parts. In fact, it was too much in the nature of architectural patchwork. It was more as a decorator than as an architect that they must admire Mr. Chamberlain. In his buildings might be seen peeping out here and there bits of the loveliest detail, often equalling in beauty the best in ancient examples; but those they only regarded as costly buttons on the garment. They required the good figure first, and then the gilded garnishing of the garment. Probably to this intense desire of decoration, instead of form for its own sake, might be attributed the general monotony of his buildings and the similarity between all classes of his buildings. In Mr. Chamberlain's work there was a great deal to love for its prettiness, but little to admire for its nobleness. He always composed love-songs such as to attract their eye, but their imaginations were never captivated and conducted to regions afar off. He was one whom it would take a man of no mean power to emulate, much more to surpass. He rode well towards the crest of the great art-wave of naturalism now tossing over the continent of Europe. He was artistic, but he did not go meandering into mediævalism and reproduce in his architecture relics of an exploded feudalism. A modern utilitarian architect in every sense, he seized the materials of modern introduction, such as iron and terra-cotta, and made them bend to his will as his judgment and taste dictated. The "little garden" had blossomed under Mr. Chamberlain's tender care, and the result might be that our homes would be better, our streets more beautiful, our churches and chapels fit for the worship of a sublime Creator. Art might, then, be as cheap as the cheapest commodity, and it would grow in our highways and byways of modern life, and our cities and towns would become the Athens and Venice of modern times.

A discussion followed, in which Messrs. Doubleday, V. Scruton, J. Cotton, and others took part. All the speakers referred in terms of admiration to Mr. Chamberlain's work, although some of them criticised particular features of it. All of them also confessed to a debt of gratitude to him for having lifted architecture in Birmingham from the dull level into which it had fallen, and expressed the conviction that his example would be attended with most beneficial results in the time to come. A vote of thanks was unanimously passed to Mr. Cross, and the proceedings terminated.

### HOUSE SANITATION.

A PAPER was read by Dr. Robert Bell at the meeting on the 19th inst. of the Glasgow Philosophical Society, upon house sanitation. The author said that dishonest plumbers and builders were frequently as guilty of manslaughter as were the wretches who from time to time were convicted of that crime at the bar of justice. He referred to two cases of bad drainage met with in his own experience. In one of the cases four children had been attacked with typhoid fever, while in the other case a number of children had been attacked with diphtheria, as a consequence of defective drainage. It was appalling to contemplate how many valuable lives might have been sacrificed to the avarice of tradesmen in the construction of defective drains. As a protection against bad drains he suggested that the work should not be covered in until it had been inspected by a surveyor, and certified to be in perfect order. The pipes should also be examined periodically. He recommended that the surveyor should be appointed by Government, and that he should be independent of plumber or proprietor.

Dr. Ebenezer Duncan said that if sewage gas propagated fever at all, it did so in a very small degree. In his own practice he found that where there were defects in the sewage pipes of a house the inhabitants suffered from headaches and sore throats, but he had no reason to believe that epidemics were propagated by sewer gases. It was too frequently the case with medical men when they were called in to a case, and found there was a defect in the drainage of the house, they considered the defect sufficient to account for the disease. That, he thought, was a false position for any man to take up. He agreed with Dr. Bell that Government inspectors should be appointed, and he thought that the smoke test should be applied to all pipes in order to ascertain whether they were in proper working condition.

Mr. Thomson, architect, said the present state of the drainage in Glasgow was a disgrace to civilisation.

A vote of thanks was accorded to Dr. Bell for his paper.



## NOTES AND COMMENTS.

WE have to announce with great regret the death of Mr. JAMES THOMAS KNOWLES, the well-known architect, which took place at his house in Russell Square on Sunday last. Mr. KNOWLES had attained the ripe age of seventy-six, and for some years past had retired from practice. He was a Fellow of the Institute of old standing, and died a member of the Council and Chairman of the Board of Examiners for District Surveyors under the Buildings Act. His professional work was of a miscellaneous private character, the Grosvenor Hotel at Victoria Station and the Thatched House Clubhouse in St. James's Street being perhaps his best-known buildings. He was to be congratulated upon having made a considerable fortune by his practice. Of his character and disposition we cannot speak too highly; he was signally a man of broad views and large experience, upright and honourable, courteous and considerate, a sound adviser, and a staunch friend. One principle of his is worth quoting for the benefit of the younger men of his profession:—"Don't merely make your work strong," he used to say, "make it stronger than strong." His son is Mr. JAMES KNOWLES, the distinguished editor of the *Nineteenth Century*, an architect also by profession, and a member of the Institute.

AN association of manufacturers and exporters has been founded in Stuttgart which might be imitated elsewhere with advantage. The agency does no business on its own account, but leaves the execution of all orders to the respective manufacturers, its only aim being the furtherance of the export trade by bringing buyer and seller into contact. With this object it publishes an annual catalogue in four different languages, containing the names and addresses of the various firms belonging to the society, and undertakes to transmit to the different manufacturers any orders received from abroad. Sample orders may be addressed to the agency whenever a personal selection is impracticable, and assistance and advice are readily granted in all transactions. The society guarantees the reliability of the firms composing its members, and undertakes to transmit goods ordered, packed and complete, within a specified time. Should a manufacturer, from any cause whatever, be prevented from executing an order, the agency undertakes to transmit it to another equally good house.

THE forthcoming Health Exhibition will be remarkable for the number of exhibitors; that is, if a conclusion may be drawn from the complaints of exhibitors who have been allotted no more than a fraction of the space they solicited. It would seem as if the programme had been based on too large a scale, or too many foreigners had been invited. If the visitors are in proportion, the committee will have no reason to be dissatisfied. It deserves to be noted that, although the work is apparently carried out in an inexpensive style, these exhibitions are costly. At the Fisheries Exhibition there was a daily average of over 18,000 visitors, the total number being 2,703,051, yet the balance remaining, after paying expenses, did not reach 9,000*l*. In other words, the profit on every visitor was only about  $\frac{1}{4}$ *d*. By taking credit for the rent due on the Health Exhibition, the furniture, &c., the balance has been brought up to 16,753*l*. The expenditure amounted to 131,392*l*.

A BUSINESS meeting of the Royal Institute of British Architects was held on Monday, the 24th, the President, Mr. H. JONES, in the chair. Upon a resolution proposed by the Council that two old members of that body should go out of office every year, an amendment was moved by Mr. RIDGE, and seconded by Professor KERR, to the effect that this was not a satisfactory response to the wish of the general meeting expressed on a former occasion. The amendment was carried by a small majority, all the members of Council present voting against it, although Mr. WATERHOUSE explained that he and some of his colleagues within the Council had opposed the conclusion arrived at. Notice of two motions was given by Professor KERR for a meeting which is to be held on April 21st, to the effect that the distinction made on the face of the voting papers between the old members of Council and the new nominees is undesirable, and that the honorary secretaryship ought to be restored to its old form of one secretary for home business, and another for foreign. A new arrangement was agreed to respecting the examination for the admission of

Associates, whereby to extend its application to the colonies, it being already extended to all parts of the United Kingdom. A further proposal that after 1887 the principle of examination should be applied to candidates for admission as Fellows, was postponed for consideration at another meeting. The business, we are pleased to hear, was conducted without asperity; and we are fain to hope that a good deal more of the spirit of concession (to adopt a phrase employed by the Honorary Secretary with less tact than we had given him credit for) may now be exhibited on the part of the members of Council generally, as the only means of avoiding further complications. It is quite clear that such a body as a Royal Institute of Architects in England cannot possibly for any length of time be made the subject of autocratic experiments by casual office-bearers; the very instinct of the national character is against it.

BUYERS of Eastern rugs like those which flood the market are disappointed when they find that the beautiful colours are fleeting. The Persian Government have issued a decree prohibiting the importation of aniline dyes, which were found to exercise an injurious effect upon the textile industries of the country. If this prohibition is strictly enforced, there is reason to expect that Persian carpets will resume their former reputation for durability of colour, and thus improve the demand for them in Europe.

THE annual Spring Exhibition of the Manchester Academy of Fine Arts, which was held last month, has been fairly successful. The sales of pictures amounted to 802*l*, as against 760*l* last year, the number of works sold being about the same; 233 season tickets were purchased, and 2,275 persons paid for admission at the turnstiles, being an increase of 72 season tickets and 783 admissions on payment over last year. At a meeting of the Academy, which was held on Tuesday evening, the following architects were elected associates—viz., Messrs. WILLIAM A. ROYLE, ROBERT J. BENNETT, W. K. BOOTH, and HAROLD G. GRIMSHAW.

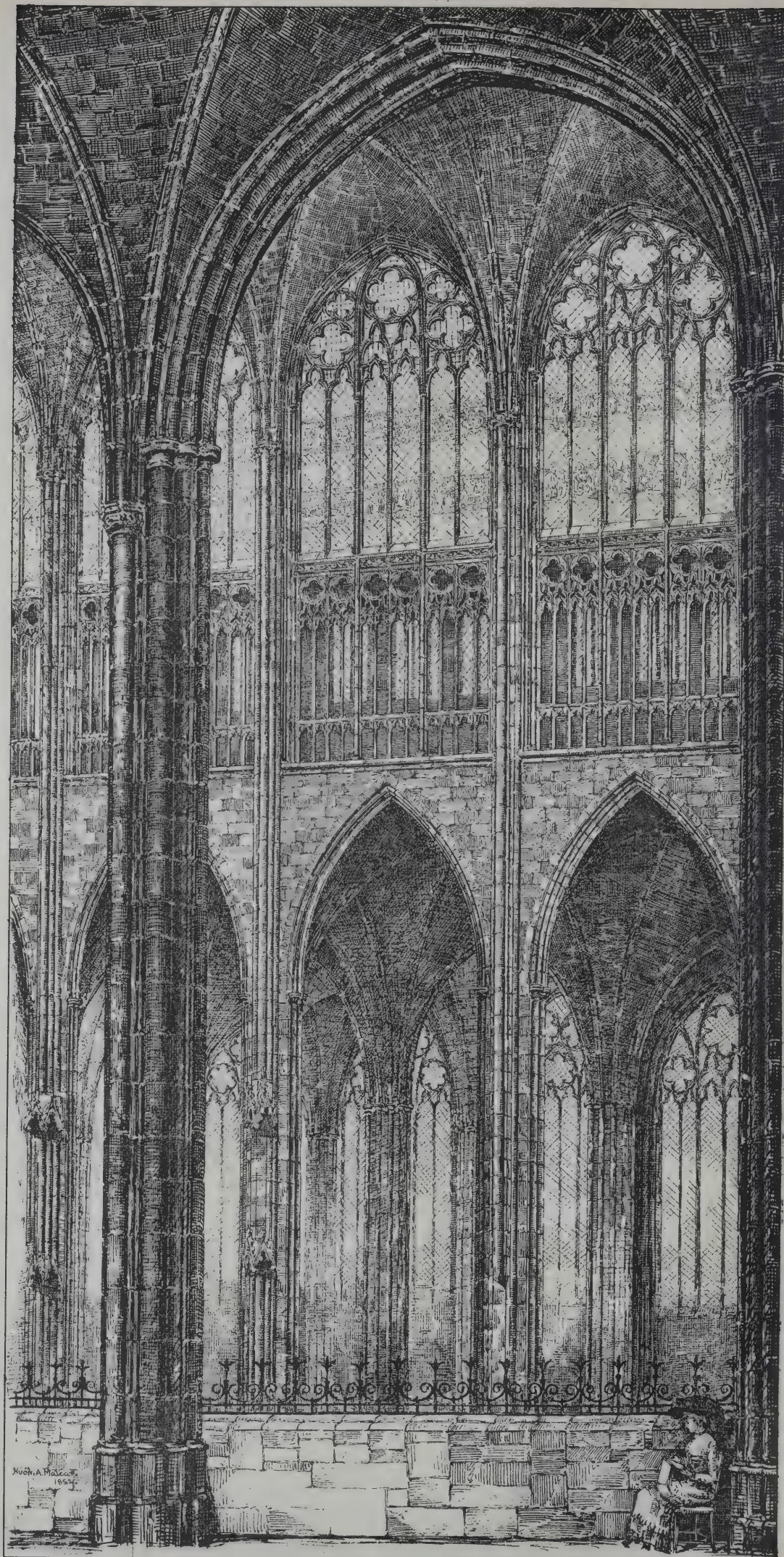
THE abolition of the duty on silver plate is now demanded with increased vigour, and it would seem as if the duty was an impediment to the production of artistic work. It has been said that English pottery must have been in a different position to what it now holds if an institution analogous to Goldsmiths' Hall exercised sway over the pottery. The duty has, however, the advantage of keeping the English trade in the hands of English goldsmiths. Some of the German Chambers of Commerce have been complaining of the duties upon silver plate and table accessories in England, which amount to a complete exclusion of German wares from the English market, and an abatement of the import duty by at least 5 per cent. on the value is demanded. The trade with England, it is believed, would, under conditions more favourable, be no inconsiderable one.

THE Edinburgh Architectural Association have published a lecture which was delivered in the last session by Mr. MARSHALL, M.A., the rector of the High School. The subject is "Amateur House Decoration." One extract will show that the author has embodied "an experience in picturesque treatment of interior which was very suggestive and valuable at the present time." "The separation of so-called high art from the art of the decorator has a ruinous effect on both. Our pictures are poor in style, mean in design, pale and ineffective in colour; our furniture and our draperies are ugly and unmeaning. No painter can be a fine painter, in the sense in which Titian, or Veronese, or Reynolds was a fine painter, who is not essentially a decorator, painting with a view to the walls of noble rooms and galleries. No decorator can be a fine decorator who is not essentially an artist, that is, an exponent through skilful handiwork, of an ideal—of something too great and too deep for words, which unites our souls and bodies with the songs of birds, and the bloom of flowers, and all the large magnificence of visible nature. An architect's aim, it seems to me, should be exactly the same in kind with that of a sculptor—to fix noble emotions in noble form; a decorator's should be that of the painter—to express in line and colour, in a given space, the passion of mankind, its love and its joy. I do not see where the line is to be drawn between them. If there is any sacredness in noble flow of line or splendour of colour in statue or in painting, there is just the same sacredness in noble design of frieze or column; in splendid harmony of curtains, and carpets, and wall paper."









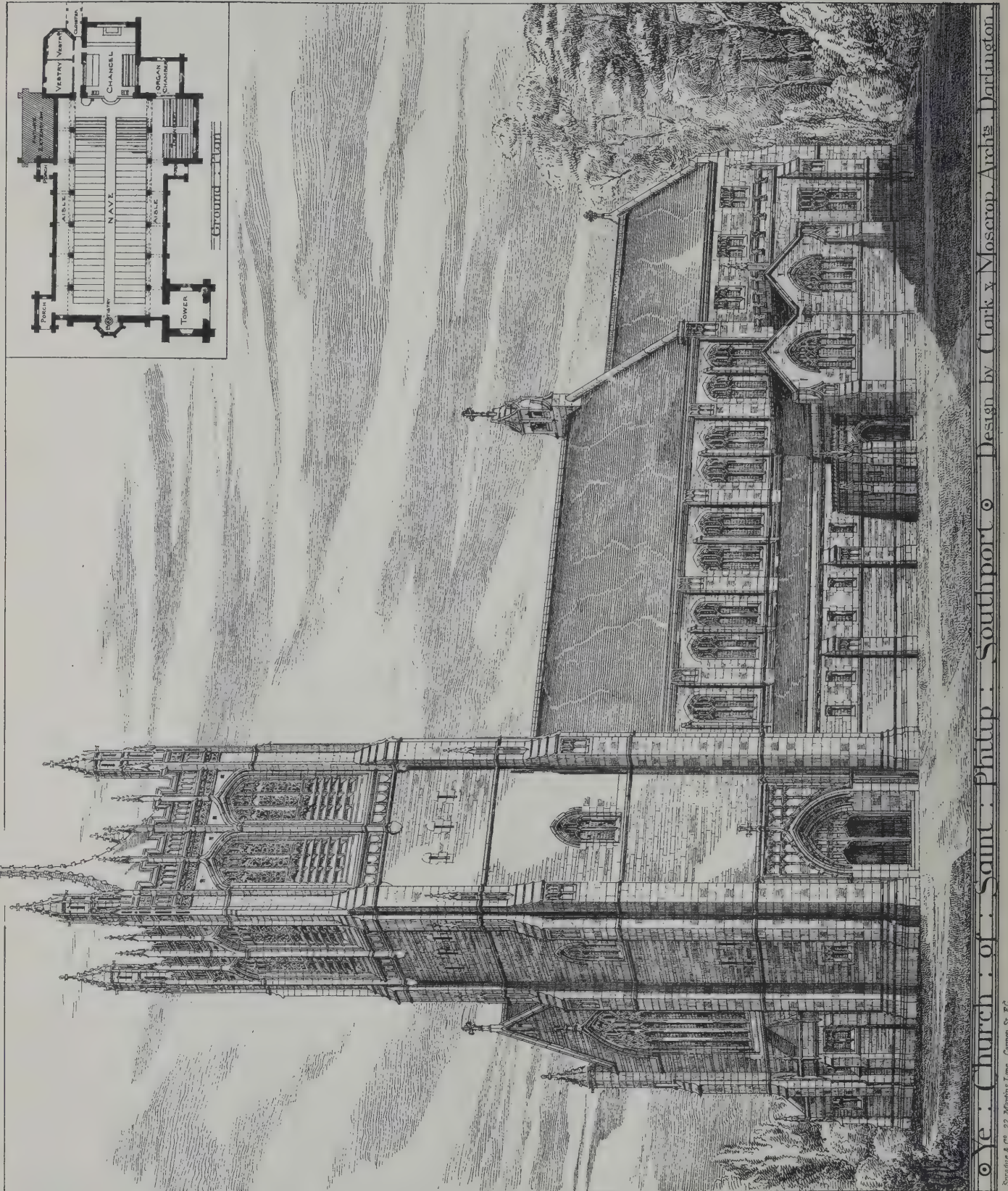
THE CHANCEL. ST. OUEN, ROUEN.

By HUON A. MATEAR.







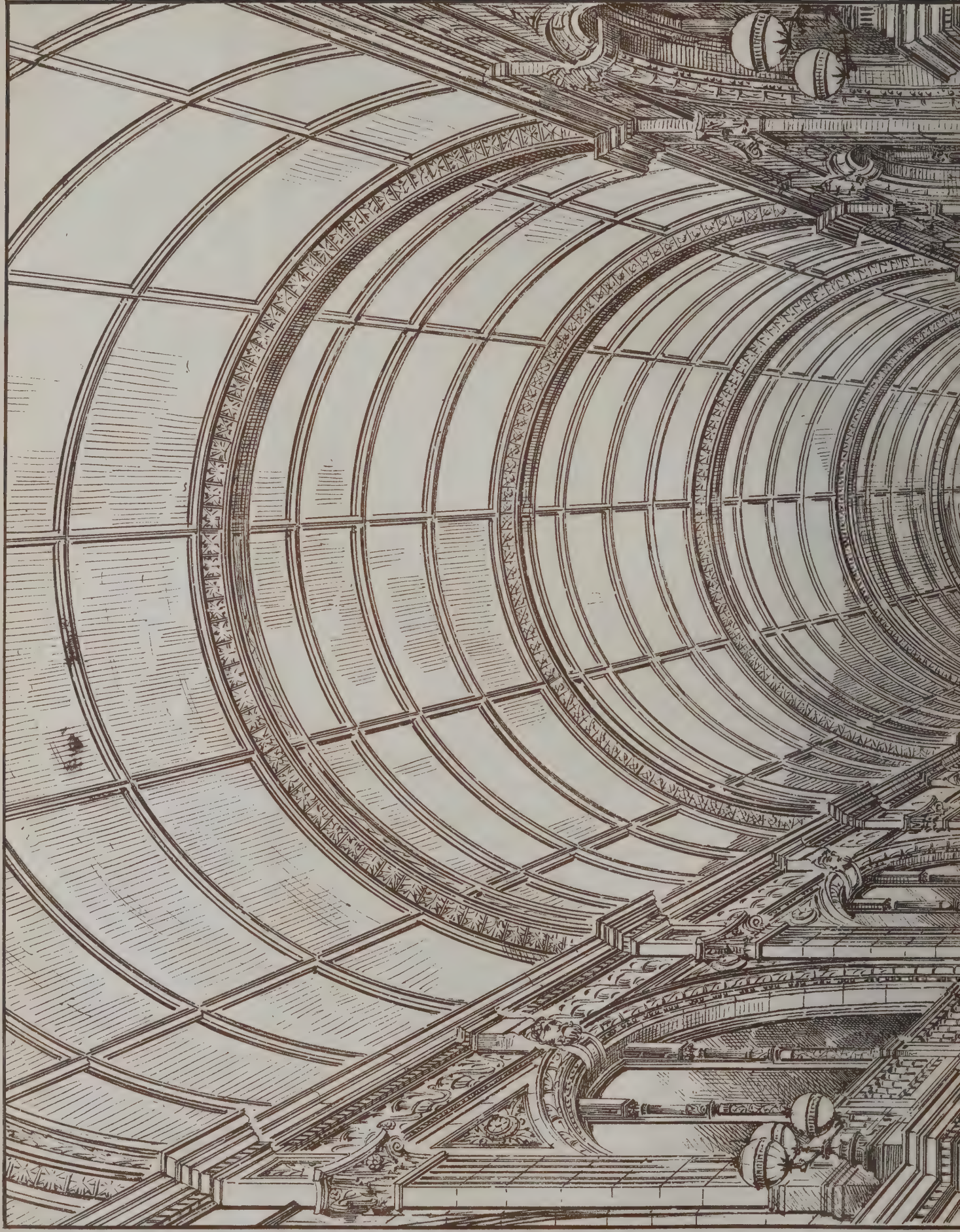


St. Philip's Church : of : Saint : Philip : Southport : Design by Clark & Moscrop Architects : Darlington

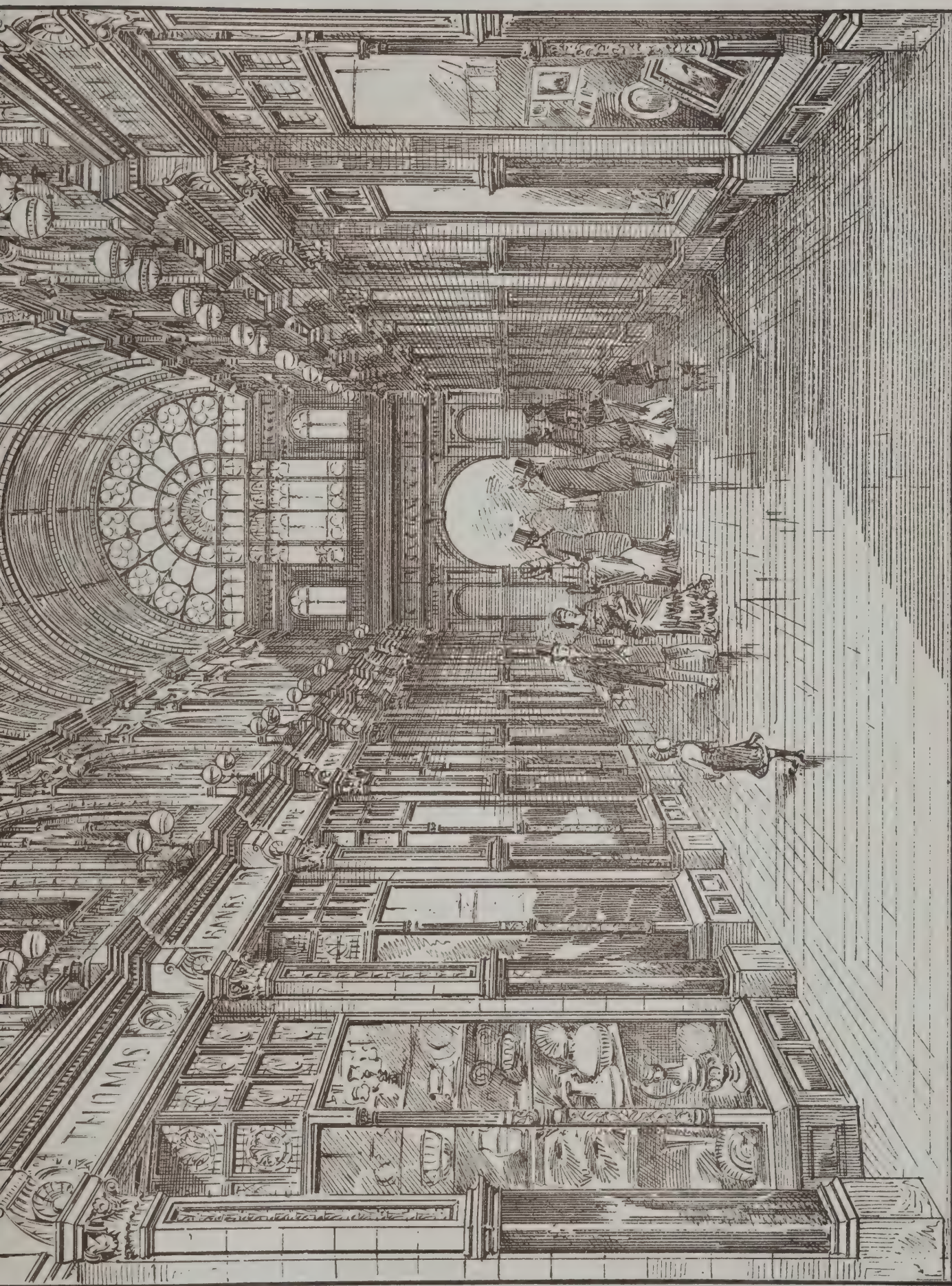










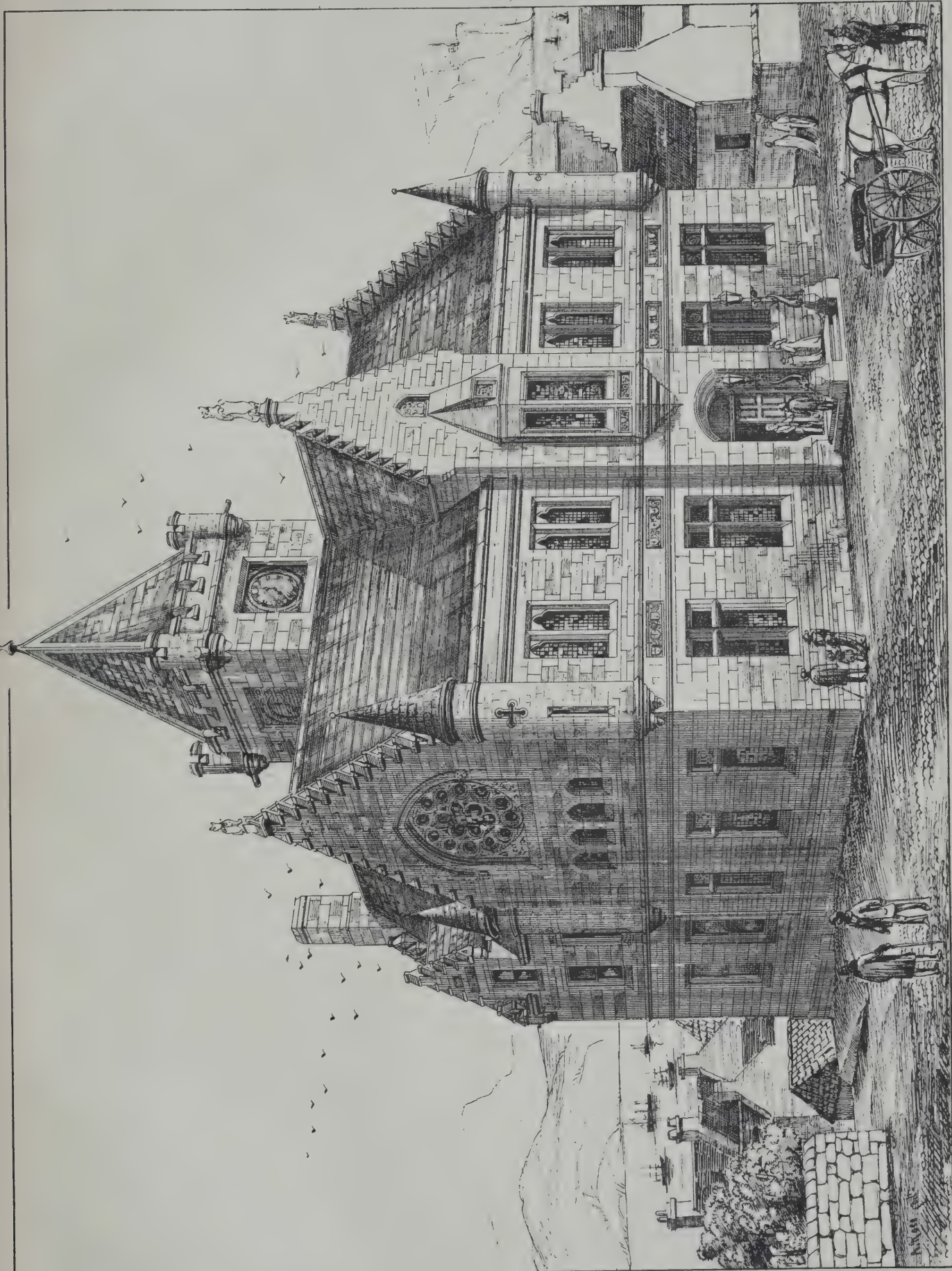


THE "HEN AND CHICKENS" HOTEL AND ARCADE, BIRMINGHAM.  
JETHRO A. COSSINS, ARCHITECT.









MUNICIPAL BUILDINGS, LERWICK, SHETLAND.  
ALEX<sup>R</sup> ROSS, ARCHITECT.









INK-PHOTO: SPRAGUE & CO. LONDON

NEW REREDOS & MURAL DECORATION, ST. JOHN'S CHURCH, WEYMOUTH.

E. F. C. CLARKE, ARCHITECT







## ILLUSTRATIONS.

THE HEN AND CHICKENS HOTEL AND ARCADE, BIRMINGHAM.

A COMPANY has recently been formed for restoring the well-known Hen and Chickens to its former uses as an hotel, and for forming an arcade of shops from the portico and vestibule of the hotel, connecting New Street with Worcester Street, emerging into the open space near the front of the Market Hall, and thus enabling foot passengers to avoid the acute angle formed by the junction of these streets.

The arcade will be divided into twelve bays on each side, each comprising a shop 12 feet wide, with a room over it; the depth of the shops will vary from 17 to 23 feet, and any number of shops on the same side may be connected if desired.

The avenue is about 14 feet wide, covered by a semi-circular arched roof, formed of cast-iron main ribs, with wooden sub-divisions glazed with ornamental glass. The floor, which will have a slight incline, will be of Val de Travers asphalte. Each shop will have a room over it of the same size, reached by a staircase at the back of the shop. On the eastern side there will be a row of bedrooms on the second floor, to be used in connection with the hotel.

Underneath the whole area of the ground floor will be a large vaulted apartment, well suited to the purposes of a restaurant, as ample accommodation for kitchen and other offices may be provided; and beneath a part of the lower level of the site will be a sub-basement for cellars, &c.

The style of the architecture will be Renaissance with somewhat of a French character, of rather an ornate description. The architect is Mr. JETHRO A. COSSINS, of Warwick Chambers, Corporation Street, Birmingham.

MUNICIPAL BUILDINGS, LERWICK.

WE publish a view of the town-hall in Lerwick, the chief town of Shetland, which was opened in July 1883. The site is on the most elevated part of the ridge on which the town of Lerwick is built, and adjoins the county buildings, with which it groups. The materials are local free-stone, with Isle Edday stone dressings, the former being of a grey, the latter of a cream colour. On the ground floor are burgh court-hall, measuring 24 feet by 30 feet, magistrates' rooms, safes, and police-cells. On the opposite side of the main corridor are Custom House offices and Inland Revenue offices, with various departmental offices and stores attached, and with entrance from the north elevation. On the first floor, which is reached by a wide stone stair, is placed the town-hall, measuring 60 feet by 30 feet, and 25 feet high, with timber ceiling running up to the roof. On the left side of the main stair are placed refreshment and retiring rooms, and on the right side a reading and news room, 22 feet wide by 23 feet long. Over this portion of the building are two smaller halls, respectively measuring 22 feet by 23 feet, with smaller side-rooms and a staircase opening into the tower. The building was designed by Mr. ALEXANDER ROSS, architect, Inverness, the contractor for the works being Mr. JOHN M. AITKEN, Lerwick. The cost of the building, exclusive of gifts, was about 4,500*l*.

REREDOS, ST. JOHN'S, WEYMOUTH.

OUR illustration of St. John's Church, Weymouth, shows a new reredos, organ-case, and mural decoration recently completed. The central subject of the reredos is the *Good Shepherd* in white alabaster. The reredos was carried out by Mr. EARP, of Kennington Road, and the colouring by Messrs. RUBARDT, from the designs and under the personal direction of Mr. E. FRANCIS CLARKE, architect, of 7 Westminster Chambers, S.W.

ST. PHILIP'S CHURCH, SOUTHPORT.

THIS design, by Messrs. CLARK & MOSCROP, of Darlington, was submitted in the competition recently decided. The committee's report concerning it states that they "unanimously regret that they could not adopt it for want of funds." Accommodation is provided for 800 persons, with transept extension of 100. All the seats are arranged so that the congregation have uninterrupted view of the pulpit. The external walls are proposed to be faced in parpoint Yorkshire stone,

with internal brick lining. Wagon-shaped roof, divided into panels with moulded ribs, stopped upon elaborately carved and moulded cornice. Hammer-beam principal rafters, with traceried spandrels. Roofs to be covered with Welsh grey slating. All internal exposed woodwork to be of pitch pine. The exits are specially attended to, and the plan is well adapted to carrying out the ritual of the Church as required by a large congregation.

ST. OUEN, ROUEN.

THE view shown in the illustration is taken from the east perambulatory looking into the choir. The original drawing is by Mr. HUON MATEAR, of Liverpool. It suggests the beauty of an interior which has always charmed English visitors. Long before Mr. RUSKIN discoursed upon St. Ouen, Dr. DIBDIN, the bibliographer, gave the following account of his impression upon entering the building:—

You gaze, and are first struck with its matchless window: call it rose or marigold as you please. I think for delicacy and richness of ornament this window is perfectly unrivalled. There is a play of line in the mullions which, considering their size and strength, may be pronounced quite a masterpiece of art. It was towards sunset when we made our first entrance. The evening was beautiful, and the variegated tints of sunbeam admitted through the stained glass of the window just noticed were perfectly enchanting. The window itself as you look upwards, or rather as you fix your eye upon the centre of it from the remote end of the Abbey, or the Lady's Chapel, was a perfect blaze of dazzling light, and nave, choir, and side aisles seemed magically illumined. We declared instinctively that the Abbey of St. Ouen could hardly have a rival, certainly no superior.

The grand western entrance presents you with the most perfect view of the choir. Nothing more airy and more captivating of the kind can be imagined. The finish and delicacy of the pillars are quite surprising. Above, below, around, everything is in the purest style of the fourteenth and fifteenth centuries. On the whole, it is the absence of all obtrusive and inappropriate ornament which gives to the interior of the building that light, unencumbered, and fairy-like effect which so peculiarly belongs to it, and which creates a sensation that I never remember to have felt within any other similar edifice.

The Abbey of St. Ouen was founded in A.D. 533, and it is therefore the most ancient of the abbeys of Normandy. It was destroyed by the Normans when they landed at Rouen in the ninth century; but when the leader, ROLLO, became a Christian a new building was erected. After undergoing many vicissitudes, the monastery was again destroyed by a fire in A.D. 1248. In the beginning of the fourteenth century JEAN ROUSSEL MARC D'ARGENT was elected abbot, and in 1319 he was enabled, by the aid of CHARLES DE VALOIS, the brother of PHILIP LE BEL, to lay the foundation-stone of the new buildings. The works continued until the abbot's death in 1339, when they were interrupted; but it has been estimated that the cost up to that time was 2,600,000 frs. Although much remained to be executed, there was a long period of inaction, until the abbacy of D'ANTOINE BOHIER, who was called "Le Grand Bâisseur"—that is, about 1510.

The architect of St. Ouen was ALEXANDRE DE BERNEVAL, who was called "Maître des Œuvres de Machonnerie du Roy," and he was a sculptor as well as an architect. He died in 1440, and was buried in the Chapel of St. Cecile, which is one of those around the choir. There is a legend that, in a fit of jealousy, he killed his pupil for introducing the pentapla, which was made the basis of the rose window in the northern transept. But the story is now supposed to have no more foundation in fact than many other legends. That DE BERNEVAL was skilled in the arrangement of windows is plain from the southern rose window.

The quality of the style of St. Ouen has been truly described by the late AMBROSE PYNTER, when he wrote:—"The Normandy Gothic touched its highest point about the middle of the fourteenth century, and the church of St. Ouen at Rouen may be considered as the most perfect type of the most perfect style of Gothic the world has seen. It needs no description; and no description, no pencil, could do justice to its elegance, its magnificence, and its purity. It is in the eastern portion of the edifice that the character of the Gothique Rayonnant is the most perfect; but though long in progress, the original design was always respected, and none of its progressive details have been suffered to injure the general effect."



## THE AMSTERDAM EXHIBITION.

THE following is the official report by Consul Robinson on the International and Colonial Exhibition at Amsterdam :—

The history of this very interesting exhibition includes experiences which may be of value in similar cases in future. The projector and subsequent manager of the exhibition, M. Ed. Agostini, of Paris, commenced his operations about three years ago, having formed a well-grounded opinion that the city of Amsterdam presented many favourable features for such an enterprise. His original idea was the creation of an exhibition under the direct patronage and management of the Netherlands Government and the city of Amsterdam, by means of a guarantee fund to be subscribed among the citizens of the latter. This proved, however, to be impracticable, in consequence of their want of confidence in the success of the undertaking; and eventually an arrangement was concluded with a private firm in Brussels, who accepted the entire financial responsibility of the exhibition for themselves and their sub-contractors, on condition of being permitted to make their own bargain with the exhibitors and the public. The Government consented to give its direct patronage and a considerable subsidy, and the city authorities placed an ample space of ground, in an excellent situation on the western border of the city and adjoining the fine buildings of the National Museum, gratuitously at the disposal of the executive committee. The organisation of the exhibition was embodied in a set of regulations, and the executive committee undertook the general management, the administration being placed in the hands of M. Ed. Agostini, with the title of Commissary-General of the Exhibition.

Negotiations were entered into with all foreign Governments, and some of them granted subsidies. The absolute amount appropriated cannot at present be exactly determined in all cases.

It will be seen that, in consequence of the arrangement by which the exhibition became practically entirely a private speculation, though advertised as being under Government patronage, many difficulties and disappointments were experienced by exhibitors. The contractors were naturally anxious to make the best bargains in their power, and to secure themselves as far as possible against the chance of loss. Under these circumstances, it was natural that conflicts should occur; and at the very outset a difficulty arose which jeopardised for a short time the whole enterprise. It was found that the contractors had granted to one firm of forwarding agents the monopoly of the local transport of exhibits into and out of the exhibition buildings, on a tariff which, though perhaps not exorbitant for single packages, was decidedly so for larger lots of goods. The firm in question had, of course, on the basis of their contract, made the necessary arrangements in the way of lighters, bridges, rails, &c., for bringing in the goods; and when these arrived exhibitors found themselves before an accomplished fact, and pledged without their consent to the payment of what they considered very exorbitant transport charges. Much indignation was felt and expressed, and many exhibitors threatening to withdraw altogether, the Executive Committee found it necessary to allow exhibitors to make their own arrangements—a decision which, however, by no means put an end to the difficulty, as no other means of bringing the goods into the buildings existed than those constructed by, and the property of, the firm to whom the monopoly had been given. Hurried measures were adopted to supply the want, but the result was an unavoidable amount of confusion and expense. The dual character of the exhibition reacted upon its success in many ways. Exhibitors were deterred from taking part in it from a want of certainty as to the parties with whom they were really dealing; and Colonial Commissioners found on their arrival here that, though accredited to the Netherlands Government, they had practically to deal with persons over whom the Government neither had nor professed to exercise any real control.

In spite, however, of all these drawbacks, the exhibition itself was undoubtedly a great success, and offered many novel and interesting features. This object of the promoters was to combine with an ordinary exhibition of international manufactures, products, and fine arts, a colonial exhibition on a scale hitherto unattempted; and in this latter enterprise they were eminently successful, owing to the patronage extended to the exhibition by the greater Colonial Powers and their Colonies. It is not necessary to go into any great detail as to the International European part of the show. Though many countries were creditably and extensively represented, it cannot be said that the total impression could be compared with that of its predecessors at London, Paris, and Vienna, nor was this to be expected.

France decidedly bore away the palm in the number and quality of its exhibits, followed very closely by Holland and Belgium. Germany, though fairly well represented by numerous exhibits, did not compare favourably with the three first-named countries. The other European nations offered little worthy of special remark; and the show of British goods, with few exceptions, was of the very poorest character, so much so as to make every British visitor regret that his country was represented at all. The number of British visitors was comparatively small, no doubt in consequence of the exhibition being practically almost ignored

by the British press—a matter the more to be regretted, as in its other features it should have been especially interesting to the British nation. In the Fine Arts Galleries the exhibits of France and Holland were of exceptional excellence, but those from other countries were neither numerous nor of any great interest. England was entirely unrepresented.

There was an excellent show of machinery, principally from France, Belgium, and Holland, the colonial sugar industry being especially well exhibited by several complete installations for cane-crushing and boiling. The paper-making of Belgium and the shipbuilding industry of Holland also figured prominently and well. England, with one or two exceptions, was again very indifferently represented. Part of the new National Museum was occupied by a loan exhibition of retrospective art of quite unusual excellence, attached to which were the loan exhibits from South Kensington, part of the collection of H.R.H. the Prince of Wales and of Lord Lytton, with other private collections from British India, which were much admired.

But the chief feature of the Amsterdam Exhibition, and that which gave it its distinct and characteristic interest, was the colonial section, together with the sections of China and Japan. In these the elaborate art productions of the ancient civilisation of the Chinese and Japanese Empires, of British India, and of the Dutch East Indies, were shown on a scale hitherto unapproached as a whole; the manner of living, dwellings, utensils, and home industries of the great peoples of the East as well as of the West Indies, were spread out in almost endless detail. The peoples themselves were numerous represented, and Chinese, Japanese, Hindoos, Javanese, Malays, the native and negro races of Surinam, Arabs, Turks, Tunisians, could be studied at their work and in their homes. Even a Javanese concert and ballet could be enjoyed, and proved a great attraction.

The Dutch East and West India Governments had erected a spacious separate building on the grounds of the exhibition, containing certainly the most complete collection of the products, arts, and industries of these countries, and of models of every possible description of dwelling, household utensils, modes of transport, roads, bridges, and plantations, which has ever been brought together. It will be a great pity if such a splendid collection should ever be dispersed again; and I understand that steps are being taken to give it a permanent character. The Surinam native, negro, and mulatto races were housed in another large separate building, and were a source of endless curiosity and interest—the people themselves, their houses, dresses, rude arts and industries, and mode of life forming a lively picture. This was a private speculation, about thirty of the natives having been brought to Amsterdam for this purpose, and lodged in a large and lofty circular building, with ample room to display themselves and their belongings.

The exceedingly tasteful and interesting British Indian court did very much to counterbalance the painful impression made by the English exhibits. The raw produce of British India, its ancient arts and industries, were well and compactly set forth. The novel experiment of a tea-room, in which at certain hours the Calcutta Tea Syndicate provided an excellent cup of tea gratuitously, was a great success as far as the constant crowd of visitors was concerned; and it may be hoped that the object of the syndicate, the introduction here of Indian tea for consumption, has been thereby advanced. The textile fabrics exhibited were of special interest, and altogether the arrangement and appearance of the court was very satisfactory.

Siam was represented by a small but interesting exhibition of products and models. The Chinese exhibits, which were attended to entirely by natives of that empire, occupied a very large space, and were of almost endless variety. With the exception, however, of some very beautiful examples of cabinet work and of porcelain, &c., they compared rather to their disadvantage with their Japanese neighbours, who had brought together an immense collection of objects of art, of considerably greater intrinsic richness and excellence. So large and beautiful a collection of the best products of Japanese art has probably never been seen.

The French colonies were represented by Tunis, Algeria, Senegal, New Caledonia, French Guiana, Réunion, Cochin China, Pondicherry, and Tahiti, the Tunisian exhibition occupying a large building specially erected for the purpose, and containing a fine collection of industrial and artistic productions, together with the raw produce of the country, such as the splendid iron ores of Mokta and Benisaf, and the North African marbles.

The Australian Colonies of New South Wales and Victoria were especially prominent, with a magnificent show of their raw produce—wools, gold and other metals and ores, coal and shale, wheat, woods, &c., together with their native wines, tinned and preserved meats, and other industries. Their ethnological, botanical, mineral, and natural historical collections were deservedly admired for their completeness and excellence. Altogether, these two Colonies made an excellent figure, and their exhibits have certainly left an abiding impression on the trading world here.

Of other British Colonies, the Cape of Good Hope, Trinidad, Singapore, Natal, Mauritius, Demerara, and Queensland, were more or less adequately represented by exhibits. Brazil and Uruguay showed very fine collections of raw produce, coffees,



sugars, wools, &c. The Transvaal had a small but well-selected show of wools, wines, ostrich feathers, wheat, and other raw produce and minerals. The Republic of Haiti was also represented by a small but carefully selected collection of its products.

It will be seen from the above short summary that the object of the promoters of the exhibition, as far as they aimed at a comparative show of the colonial products of the whole world, was very fairly attained. In many instances the collections were of unique excellence and interest.

As to the results of the exhibition, as far as the pecuniary speculation of the promoters is concerned, it is difficult to say whether the final winding up has been a profitable one for them, but there seems much reason to doubt it, as they have involved themselves in endless responsibilities, disputes, and lawsuits. The great lottery, which formed part of the programme, has certainly contributed its share of discredit to exhibition lotteries in general, by the apparent disproportion between the nominal and the intrinsic value of the prizes.

It does not seem at all likely that it would be possible to get up another International exhibition on the same basis as that on which this one was founded: nor that it is advisable for Governments to join, or to give their patronage to international exhibitions in which private speculation plays the foremost part. That private enterprise in connection with exhibitions is becoming very general, and in many cases indispensable is clear, but it seems desirable that it should be confined to the construction and management, and that the Government or some public body should accept the final responsibility if the exhibition is to be of a truly international character.

As far as the city of Amsterdam itself is concerned, it must be confessed that the balance of results appears to be a very beneficial one. No doubt many expectations have been disappointed, and many speculations have proved failures. But, on the whole, the city and its inhabitants have greatly profited by the Exhibition. The improvements which it called forth are permanent, as is the information and experience acquired: new blood has been poured into the veins of the old city, and new ideas have made themselves felt.

## THE INTERNATIONAL FORESTRY EXHIBITION.

AT the last weekly meeting on of the executive committee of the International Forestry Exhibition in Edinburgh, the tenders for erecting the exhibition buildings were under consideration. The plans for these buildings, which will be of wood, with incombustible felt roofing, have now been prepared by Mr. Robert Morham, City Superintendent, and will suit the site—Donaldson's Hospital grounds—on which they are to be erected. Access will be obtained by the western gateway of the hospital, the eastern being reserved for the ordinary traffic to and from the institution. The principal entrance to the exhibition will be situated on the gravel walk, about twenty yards within the grounds. Entering by a vestibule, in which will be six turnstiles, visitors will proceed along a covered roadway for a short distance, and then, turning to the right, will pass between a jurors' and a left-baggage room into the exhibition building at its western end. The plan of the building is a parallelogram, about 500 feet in length by 60 feet in breadth, with three transepts about 80 feet in depth. At the southern end of each transept a doorway and flight of steps communicate with the outside grounds. A handsome dome will surmount the building at the intersection of the centre transept, and the symmetry will be maintained by cupolas of somewhat similar construction, where the other transepts intersect the main building. Light will be obtained from these, as well as from a zone of glass along each side of the roof-ridge. The walls are to be constructed of upright six-inch flooring, grooved and dressed, except the gable walls of the transepts, the woodwork of which will be arranged diagonally, giving a more ornate aspect to the exterior of the structure. In the interior a series of over forty arches, with the open woodwork of the roof and copious decorations, will enliven the scene. In rear of the main structure, in the space between the transepts, refreshment-rooms, kitchen, lavatories, &c., will be situated. It is proposed to erect several minor buildings of an ornamental nature in the grounds, and the plan of one of these, in the form of a Swiss chalet, has been sent to Her Majesty the Queen for her approval. The railings enclosing the hospital grounds will be boarded up to secure the privacy of the exhibition, and with the same object wooden fencing, 8 feet high, will enclose the exhibition ground upon the remaining three sides. Buildings of a commodious nature, for the accommodation of the executive committee, are to be situated in a field to the west of the hospital grounds, altogether outside the exhibition.

A printed list has been forwarded to the committee by order of the Government of India, showing the publications and maps relating to forest administration in that country which have been sent to the Edinburgh exhibition. A further communication has been received, applying for space for wood, bamboos, &c., which are also in course of transmission. The Maharajah of Johore is an exhibitor in almost every class, while the Governments of Chili and Denmark have applied for 630 and 600 feet respectively. The

Scottish Papermakers' Association have obtained a space of 400 feet in the exhibition, and the number of contributions promised by our foresters, as well as the models and carvings of private individuals, point to a most exhaustive and interesting display of the arboricultural resources of the country. In the New Brunswick Legislature a speech was made by the Hon. Duncan Wilmot, the Lieutenant-Governor, in which he said that the attention of his Government had been called to the proposed International Forestry Exhibition to be held in Edinburgh during the present year, and intended to be illustrative of the forest produce of the world. He had deemed the occasion a fitting one in which to make more widely known the variety and extent of the forest resources of that province, and by which public attention was thus being attracted to New Brunswick through the medium of a display of its forest wealth. He had thought it expedient to seize the opportunity to disseminate information as to their splendid agricultural capabilities. Mr. Peter White, M.P., was also moving in the direction of having Canada properly represented at the Forestry Exhibition.

## THE ECCLESIASTICAL COMMISSIONERS' SOUTHWARK ESTATE.

THE Select Committee of the Ecclesiastical Commissioners, appointed on December 13, "to consider and report upon the subject of certain house property in Southwark of an inferior and dilapidated character," have issued their report. The committee, having inquired into all the circumstances of the property, many of their number having visited it personally, state that it is a part only of the Southwark Estate, formerly known as Winchester Park, and consists of a number of small and narrow courts abutting on Redcross Street, and is adjacent to, but not a part of, the district known as the Mint, the boundary of the Commissioners' property being that of the ancient "Liberty of the Clink." The occupiers of the houses—about 1,056 in number—"are labouring people, almost entirely 'unskilled' workers, employed in the water-side warehouses, in hat-making, &c. Some obtain their living by 'rabbit-pulling,' an employment peculiar, apparently, to this district, and said to be very detrimental to the health of those engaged in it, and to the comfort of their immediate neighbours." The report states that the weekly-rented property which had come into the possession of the Board in this district is of "a very poor character"; much of it is in a wretched condition, and such as "could not, by any process short of rebuilding, be brought up to the standard of modern sanitary requirements." The committee had had no difficulty in coming to the conclusion that the right course to pursue was to let the greater part of the area, if possible, for the erection of labourers' dwellings. A builder of good repute had taken a lease for a long term of years of a large part of the Redcross Street site, to build dwellings of the character required, and they will be erected under the supervision of the agents of the Commissioners. The committee add:—"They will accommodate a much greater number of persons than that now occupying the same ground, and they will be so planned as to include a large number of rooms which may be let either singly or in sets of two or more." In arranging this letting the Estates Committee had taken special care that any removal of the present tenants "shall be as gradual as is possible." The old buildings would not all be removed at once, but those on part of the site will be allowed to stand until the new blocks on the remainder are ready for occupation. Arrangements had also been made for giving an option to the Commissioners' tenants of becoming occupiers of rooms in the new buildings at moderate rents, and by these means no large number of the tenants will be disturbed at one time. Tenements becoming vacant will not be relet, and thus a number of houses and rooms in the old buildings will be available for temporary occupation by those who had had to leave the houses cleared for removal. The committee think that some further portion of the estate may be appropriated for erection of labourers' dwellings of a similar character. Concluding their report, the committee say:—"In dealing with the matter referred to them, the committee felt bound not to overlook various social and public aspects of the question as to the provision of artisans' or labourers' dwellings. Without touching further on these larger bearings of the subject, they may say that they are fully aware of the considerations often urged in favour of diminishing the density of the poor populations in the centre of London by encouraging their migration to the suburbs. They think, however, that the special local circumstances afford good reasons for adopting in this case the policy which is being followed by the Estates Committee. They find one strong recommendation of this policy in the fact that it is in substance an application of the principles sanctioned by the Legislature in the passing of the Artisans' Dwellings Acts.

A Permanent Hospital for Newbury, Berks, is proposed to be erected. Substantial donations have already been received towards the cost of erecting a suitable building.



## A FIREPROOF PAINT.

A MEETING of the Royal Scottish Society of Arts was held in Edinburgh on Monday last, Professor Swan, president, in the chair. Mr. S. B. Wilkins, firemaster, read a paper, descriptive of a fireproof paint which he has invented. Within the last few years there had, he said, been different paints introduced for the purpose of resisting fire, and several large buildings had been coated with them, and a number of very successful experiments made. Among the objections raised against these paints were that when they got dirty they would not stand washing, and that when woodwork was once coated with them, oil paint would not dry on them. They were also very expensive, and did not keep their colour long when exposed to a strong light. His invention was particularly serviceable for painting all woodwork in connection with the roof, stage, and scenic appliances in theatres, and other places of amusement, and would also be found invaluable where wood was extensively used in the construction of stairs, hoist ways, the shelving and lining of rooms, and in painting offices and public buildings. It would also exclude insects, and was non-poisonous; and the painted woodwork could be washed by having a coat or two of oil-paint over the fireproof composition without in any way destroying its properties as a fire-resisting material. There was no asbestos used in the manufacture of the paint. Mr. Wilkins subjected several pieces of wood coated with his paint to the action of fire, and all stood the test admirably. One piece was thrust into the heart of a strong fire, and after remaining for over ten minutes it was only blistered. A gas flame was applied to some half-dozen others for an hour and a half, but beyond being slightly charred on the outside there was no injury done to the wood, which had never taken fire. In one instance the paint was cut away from a part of the wood, so as to expose it to the flame in its natural state, but the fire made no progress whatever, the outer coating of paint proving sufficient to resist the heat. The cost of the composition, Mr. Wilkins stated, would be one-third less than of ordinary paint, and he expressed his belief that, with a paint-mill, it could be turned out with profit at from 12s. to 15s. per cwt. The chairman and other members of the Society spoke of the remarkable efficacy of the paint, as shown by the severe test to which it had been subjected, and Mr. Wilkins was advised to protect his invention by taking out a patent. The chairman also suggested that Mr. Wilkins should, in a future paper, disclose the ingredients of which his paint was composed, and the matter would then be referred to a committee. Mr. Wilkins expressed his willingness to do so, and he was then heartily thanked for his important communication, which, it was said, held out the prospect of bringing about a great diminution in the number of fires.

## WARWICKSHIRE BRASSES.

A MEETING of the Archæological Section of the Birmingham and Midland Institute was held on Wednesday. Mr. Charles Williams read a paper on "Warwickshire Brasses," in which he said his one great object was to place on record the local habitations of the brasses at present existing in Warwickshire. He was sorry to say that since the time Dugdale wrote the brasses had decreased to the extent of at least twelve. As to the origin of brasses very little could positively be stated. Haines considered that they were the development of the idea sown by incised slabs, and the process known as enamelling. Brasses seemed to have appeared in England, France, and the Low Countries about the same period—viz., the thirteenth century. The date of the earliest known incised slab was about the eighth century, whilst the art of enamelling was introduced into Europe about the close of the tenth century. The earliest brass recorded in England was that of Simon de Beauchamp, who died before 1208; and the earliest existing specimen was that of Sir John D'Albernon, of Stoke D'Albernon, Surrey, who died in 1277. The earliest recorded brass in Warwickshire was that of a lady, probably of the Astley family, who died at Astley in 1400; and the next in date was 1401, being that of Thomas de Beauchamp, Earl of Warwick, and his wife. There were many advantages to be derived from the study of brasses, and not the least was the ease with which they were able to put themselves in possession of accurate copies of them. Should they require an incentive other than the love of such antiquities, they might remember that England was the only country in which anything like a series of those interesting relics was to be found. Scarcely one was to be found in France, only one was known in Scotland (in Glasgow Cathedral), two in Ireland, and not more than six in Wales. The lover of architecture would find his reward in the knowledge to be obtained by the study of the various styles of architecture prevailing at different periods, as seen in the accessories, such as brackets, canopies, &c. To the genealogist it would commend itself as affording contemporary evidence not elsewhere to be found. To the lover of heraldry it would give many examples of ancient usage in bearing arms and many instances of heraldic design, such as a clevis or relus, which were sure indications of date, frequently

when all traces of letters or figures had vanished. From the style of the lettering of the inscription the date of the erection might be determined, frequently supplying a record of the founder and date of the building of a church. He ventured to assert that there was no finer encyclopædia of costume than that to be found recorded on the various brasses in this country. Added to that was their durability and convenience, representing, as they did, in plane, almost as much as sculptural effigies did in relief, without monopolising space, which might be more advantageously employed by worshippers. He thought they might arrive at the conclusion that memorials of the past, such as those he had referred to, might be looked upon with favour to take the place of many monstrosities which had marked the resting places of the dead. It was a duty they owed to succeeding generations to preserve all such memorials. He would suggest, as a first step in that direction, the proper education of the rising generation in the knowledge of what constituted our national antiquities, and in the amount of reverence which was due to all things artistic, more especially when that quality was combined with antiquity. It seemed to him the preservation of our national antiquities should form part of our system of national education, and he was sanguine enough to believe that the mind of a child would be as much strengthened by a knowledge of our antiquities, and of the works they commemorated, as a knowledge of "what was crusted port," which he thought would be very properly followed by an "abrasion of the cuticle." He was led to that opinion by the destruction he saw daily. Only a short time ago Birmingham went to some expense in fencing with handsome palisades the old burial ground at the top of Bordesley Street, so as to utilise the space as a breathing ground for the people, but at the present time hardly half of the tops of the palisades were left. That was the same spirit which led to every other mode of disfiguration, whether it might be the removal of the noses of the knights or the inscribing on our monuments the illustrious names of Smith, Jones, and Williams. In conclusion, he gave an interesting description of the vast majority of the brasses to be found in Warwickshire, and illustrated his remarks by a large number of "rubblings" from the various brasses. At the close a hearty vote of thanks, on the motion of the chairman, seconded by Dr. Langford, was accorded by Mr. Williams, and the meeting then terminated.



## The Law of Arbitration.

SIR,—Referring to your Note on the recently-decided case of *Frazer & Co. v. Ehrensperger & Eckenstein*, it does not appear to me that what you recommend, viz., "some clear legislative enactment" is required to clear the point in question. All that is necessary to be done to prevent revocation is, that all voluntary submissions should contain the consent of both parties that the submission be made a rule of Court by either party without the consent of, and without notice to, the other, and the submission should so be made a rule of Court before either party revokes. Once made a rule of Court neither party can revoke.

In the above case the agreement contained a provision to make the submission a rule of Court, but the mistake on the part of the plaintiffs was that they did not make the submission a rule of Court until after the defendants had revoked, and until after the so-called award had been made.

15 Leadenhall Street:

Yours, &c.,

March 22, 1884.

A. HARSTON.

[The recommendation in the Note came from the Master of the Rolls.]

## The Health Exhibition.

SIR,—You would be doing a public service if you could call attention to the question of space allotment at the International Health Exhibition. I am fully aware that it has become necessary to cut down the applications and to limit the space asked for. But surely some regard should be paid to the class of goods proposed to be exhibited. This does not appear to have been done. The result is that many persons will find it utterly impossible to exhibit the goods they have specially manufactured for this purpose. What system has been adopted I cannot tell; but certainly, if it was necessary to cut down the spaces, all the spaces in a particular class should have been made the same size, that is, manufacturers of the same class of goods should have the same size space allotted them. Then all would be placed upon the same level of advantage. Now some have 30 feet, some 20 feet, and some 10 feet—all manufacturers of the same goods and of about the same standard.

Yours faithfully,

Birmingham: March 25.

D. CLARKE.



**Wood Block Flooring.**

SIR,—The attention of our client, Mr. Thomas Wharam, of Hyde, has been drawn to a paragraph in your issue of the 22nd inst., from which it would be gathered that Messrs. Andrews & Co. were in possession of the improved system of wood block flooring therein mentioned.

Such, however, is not the case. Mr. Wharam is the patentee, and Messrs. Andrews & Co. were his agents until the 6th inst., when all business connections with them ceased.

Kindly insert the explanation in your next issue.

Manchester :

Yours truly,

March 25, 1884.

BROOKS, MARSHALL & GORDON.

**LEGAL.****High Court of Justice.—March 24.**

(Before Mr. JUSTICE MATHEW.)

ISAACS v. HARDY.

**AGREEMENTS FOR PICTURES.**

The plaintiff in this case is a picture dealer of Bond Street, and the defendant is an artist. In January of last year, the defendant agreed to paint for the plaintiff a picture of dogs and game for the price of 125/. From time to time the plaintiff called upon the defendant and saw the picture while it was in progress, and in May he sent a frame, into which the picture was set. On May 29, the defendant called upon the plaintiff and offered him 20/ if he would let him off his bargain, but this the plaintiff would not agree to, and in the result the defendant refused to deliver the picture, and the present action was brought to recover damages for the breach of the agreement. The plaintiff stated that he could have sold the picture for 250/; he had before sold one of the defendant's pictures, for which he had paid him 60/, for 180/. The defence of the Statute of Frauds was relied upon. Although some letters had passed between the parties they did not contain a memorandum of the contract, and there had been no part payment.

It was urged for the plaintiff that this was really a contract for work and labour, and not for the sale of a chattel.

His Lordship, however, held that the picture when once brought into existence was a chattel, and was therefore within the Statute of Frauds. As, however, the defendant had by his defence denied that any contract had been made at all—and he was clearly of opinion that a contract had been made, though it had not been reduced into writing—he should dismiss the action, but without costs.

**WORKS IN PROGRESS.**

**The General Hydraulic Power Company** have now laid on their mains for the supply of water at a pressure of 700 lbs. on the square inch, and the directors of the City Offices Company have availed themselves of this power for working their passenger lift at 39 Lombard Street, which has been running very successfully for the last year. The necessary alterations have been entrusted to Messrs. R. Waygood & Co., of Falmouth Road, S.E., who erected the lift on their patent balanced principle. Messrs. R. Waygood & Co. are also erecting their patent balanced lifts to be worked from the same company's mains, at the City Conservative Club, George Yard, Lombard Street, and Woolpack Buildings, Gracechurch Street.

**Messrs. W. H. Lascelles & Co.**, of 127 Bunhill Row, have just completed a large range of stabling at Seward Street, Goswell Road, for the contractor for the Parcel Post. The ground floor of buildings is open for standing place for vans; the first and second floors are for the accommodation of 260 horses. In the centre of one of the ranges and above the entrance are harness, lamp, and engine-rooms, and over these are the chaff-cutting and crushing machines, with store-rooms for hay, corn, beans, and bran, extending right and left. All the machines, and the crane for hoisting forage, &c., are worked by two  $3\frac{1}{2}$  horse-power gas engines. On the ground floor are shoeing forges, smith's shop, boiler house, mess room for men, medicine room for veterinary surgeon, and in the gateway is office for clerks. The person in charge will show the stables to visitors who take an interest in that class of construction.

**Messrs. Hayward, Tyler & Co.**, of Whitecross Street, E.C., have been awarded the gold medal, three silver medals, and three bronze medals for the excellency of their manufactures exhibited at the Calcutta Exhibition.

**Burton-on-Trent.**—An incident connected with well boring operations, which may probably interest those who are concerned in matters of water supply, has recently taken place at Burton-on-Trent. A well-known firm of brewers, finding it necessary for

their purposes to obtain a larger water supply, gave instructions to a local well-sinker to carry out the work. After sinking to a depth of 176 feet without any satisfactory result, they determined to consult Messrs. Legrand & Sutcliffe, artesian well engineers, of Bunhill Row, London, who have had considerable experience in this branch of engineering at Burton. These gentlemen advised the abandonment of this site and the selection of a fresh one. Their advice was acted upon, and at a distance of about 200 yards from the first site, at a depth of 114 feet, a supply of between 5,000 and 6,000 gallons per hour was obtained from a 5-inch tube well. The level of ground in both cases was about the same, and the geological formation was the new red marl, containing bands of gypsum, which latter give that peculiar character to the Burton water which is so much prized by brewers.

**ART WORKMANSHIP.**

**Caen Stone Pulpit.**—St. Martin's Church, Desford, Leicester, has been enriched by the addition of a handsome pulpit, which is of Caen stone. The top contains three panels, which are filled respectively with figures of Our Lord, St. John, and St. Martin. The caps of the panels are supported by marble columns, and the whole is surmounted by a richly carved cornice. The work was executed by Messrs. Jones & Willis, of Birmingham and London.

**Mosaic Work, &c.**—A mosaic reredos has recently been erected in memory of the late Mr. J. Horsfield, at St. George's Church, Hyde, near Manchester. In the centre is a light red marble cross on a cream-coloured ground, surrounded by passion flowers. On either side of this are two heads of the four evangelists on gold grounds, the panels containing them being divided by the vine and corn. There are also two mosaic panels on the right and left of this, containing the figures of Melchizedec and Aaron in colour on gold grounds. A four-light west and two vestry windows have been also presented. The west window is presented by Mrs. Horsfield, of Longlands, in memory of her husband and second son. It contains the four principal introducers of Christianity, one in each light, namely, St. John the Baptist, St. Paul, St. Peter, and Cornelius, the centurion. One of the vestry windows is presented by Mrs. Payne in memory of her husband, the subject being *Christ Healing the Blind Man*, and the emblem of St. Luke. The other, presented by Mr. R. Hall in memory of his wife, contains the figure of St. Elizabeth and the Agnus Dei. Each window has its subject surrounded by delicate ornamentation. The windows and mosaic have been executed by Messrs. R. W. Winfield & Co., of Birmingham, from designs by Mr. T. W. Camm.

**ENGINEERING WORKS.**

**Cardiff Waterworks Extension.**—The first sod of these works was cut by the Mayor and Corporation of Cardiff on the 14th inst., when Mr. Bird, the present Mayor, turned the first turf of the Llanishen Reservoir with a silver spade, presented to him by the engineer. This storage reservoir, which is situated four miles from Cardiff, and is capable of holding 300,000,000 gallons of water, is part of an extensive scheme for supplying Cardiff with water direct from Taff Fawr on the Brecon Beacons. The total cost of the undertaking is estimated at 300,000/., and includes a 24-inch gravitating main from Taff Fawr to Llanishen, the construction of compensation reservoirs on the line of route, and the storage reservoir at Llanishen. The works were designed by Mr. J. A. B. Williams, A.M.I.C.E., of Cardiff. The contract for the Llanishen Reservoir is let to Messrs. Hill Bros., of Beckenham, for 53,000/. The contractors' engineer is Mr. J. C. Dudley, and the clerk of the works is Mr. J. T. Jones.

**CHURCH BUILDING AND RESTORATION.**

**Darlington.**—A new Methodist church has been opened. The building has been erected in French Gothic style at a cost of about 4,000/. The works have been carried out by Mr. H. Dougill, builder, of Darlington, from the designs of Mr. A. H. Goodall, architect, Nottingham.

**Tunstall.**—The foundation-stone of an eastern extension of Christ Church, Tunstall, has been laid. When the additions are complete the extreme length of the church from east to west will be 104 feet, and the width of the transept from north to south 66 feet, the nave being 42 feet wide. The contract for the extension has been let to Mr. J. Proctor, of Tunstall, for 2,200/., and tenders for the renovation of the existing fabric have still to be obtained. Mr. A. R. Wood, of Tunstall, is the architect.

**Trowbridge Tabernacle.**—This chapel has been reopened after extension. The external walls are of Bradford (Wilts) stone,



faced in random-coursed work, and the dressings are of a superior local freestone. The roofing is slated. The total cost of reconstructing the chapel, remodelling the school-buildings, and erecting ten new class-rooms, including all furniture, and organ, and stained glass, and laying-out the extensive grounds of the tabernacle premises, and architects, and clerk of works, and everything, is 8,400*l*. The architects are Messrs. Paull & Bonella, London and Manchester.

### SCHOOL BUILDINGS.

**Great Harwood.**—New schools are about to be built at Great Harwood, near Blackburn, in connection with the Methodist free church. The buildings will be used for day and Sunday-school purposes, to accommodate 1,000 scholars, and will consist of a large school-room with seven class-rooms adjacent thereto, and an infants' school for 150 infants. The plans have been prepared by Messrs. Maxwell, Tuke & Hurst, architects, Southport, and the works will be carried out under their supervision.

**Thackley.**—A new school has been erected at Thackley for the Idle School Board, from the designs of Mr. Jowett Kendall, architect, of Idle. The schools are arranged in two departments—mixed and infants—accommodation being provided for 250 children in the mixed department and 200 in the infants'. The style of architecture adopted is Gothic. The cost of the buildings is 2,950*l*., making, with the cost of the site, a total of 3,676*l*.

**Thorpe.**—A school has been erected for the Idle School Board. The style is Gothic. The accommodation provided is for 630 children, in two departments, mixed and infants. The contractors for the principal works were Messrs. Obank & Sons, of Idle. The plans were prepared by Mr. Wilson Bailey, architect, Bradford. The cost of the buildings, covered playgrounds, and boundary walling has been 3,100*l*., and the cost of the site 1,150*l*., making a total of 4,250*l*.

**Windhill.**—A new school is to be erected for the Idle School Board at Windhill, to accommodate 450 children. The plans are being prepared by Mr. Sam Wright, architect, Shipley.

### NEW BUILDINGS.

**Goole.**—A sailors' institute has been opened at Goole. The building has been erected at a cost of 1,600*l*., and is situate in North Street. It is of brick, in the Tudor style of architecture. The exterior, fronting North Street, has a pretty appearance, and contains three windows and pair of doors (the latter in the centre) on the ground-floor, and four windows on the second storey. The building internally is more commodious than it appears from the outside, for it contains six rooms on the ground floor, and one large room on the second storey. It is intended that the bottom rooms should be used as reading-rooms, &c., and the larger one upstairs for holding services in. The accommodation is as follows:—Ground-floor—Library or committee-room, reading-room, recreation-room, kitchen, cloak-room, with a room to hold 100 persons. The mission-room is on the second floor, and is reached by main staircase 4 feet wide, landing on vestibule at each side, also a private staircase 3 feet wide. It is lighted on all sides. The roof is open, with dressed timber. The work has been executed by Messrs. Jackson Brothers, contractors, Goole. The architect is Mr. W. A. Gelder, of Hull.

**Home for Incurables, Carlisle.**—The Committee of the Border Counties Home for Incurables have selected the design by Mr. G. D. Oliver, of Carlisle. The elevation shows a building of simple cottage type of Gothic character, picturesquely grouped and well set back on the site so as to show it off to advantage. The institution is planned at present for twenty beds, but so arranged that it can be extended as funds may permit or the necessities of the institution require. The central portion of the building is two storeys high, the centre being devoted to matron's sitting-room on the ground floor with bedroom above, staircase, and store-rooms. On each side of this central portion there will be, on the ground floor, a day-room and dormitory, one pair of rooms being devoted to men, and the other to women. On the first floor there are two wards planned for six beds each, one for males and the other for females, and each overlooked by a nurse's bedroom. On the ground floor in the rear of the apartments already named, there will be a large dining-room and a prayer-hall centrally placed, so as to be conveniently accessible both for the male wards and the female wards; and the kitchen block is well away from the main building, but at the same time very conveniently situated for the service of the dining-room. The whole of the ground floor, which is paved with blocks of wood, is on a level with the ground, so that patients may readily be wheeled out in bath chairs, and on the sunny sides of the building verandahs have been provided, into which the wards open, where patients may sun themselves and take the air in fine weather. The sanitary

arrangements have been planned upon the most improved principles, and great attention has been paid both to the heating and ventilation.

### TOWNS IMPROVEMENT.

**Kenilworth.**—A year ago the Local Board contracted to purchase the Abbey Fields Estate, consisting of about seventy-eight acres of land, with a house and nineteen cottages thereon, with the object of preserving the beautiful scenery around Kenilworth Castle, the purchase money being 16,450*l*. The Local Government Board held an inquiry, and a loan of 12,000*l*. was authorised, to be repaid within sixty years. In support of the application, evidence was tendered to the Government inspector that, by the sale of frontages to Abbey Hill, Rosemary Hill, and Bridge Street alone, 5,000*l*. could be realised. Notwithstanding the sanction to borrow 12,000*l*., the Local Board felt that it was undesirable to borrow more than 5,000*l*.; but there is a desire not only in Kenilworth, but in the county generally, to avoid building on the frontages to Abbey Hill, Rosemary Hill, Bridge Street, and High Street, and a fund is being raised by voluntary subscriptions, to be applied in securing the necessary extension of the churchyard, and towards the purchase-money and the cost of improvements on the estate. It is believed that if 6,000*l*. can be raised, the sales of frontages may be limited to parts of the estate where building would not obstruct the view or deteriorate the scenery, and that the beautiful views of the Castle from Abbey Hill, Rosemary Hill, Bridge Street, and High Street will be left uninterrupted, upwards of sixty acres of land will be preserved for public walks or pleasure grounds, and about two acres will be added to the churchyard, and the necessity for a cemetery avoided.

**Margate.**—Messrs. Joseph Brown & Son, contractors, Margate, have begun the works for the proposed erection of the Marine Palace and Swimming-baths. The swimming-baths, two in number, will form one building 240 feet in length by 80 feet in breadth. The Marine Palace will be 142 feet long, and have an average breadth of about 60 feet. When the plans have been carried out in their entirety there will be a range of buildings about 700 feet in length, and along the whole distance will be open and covered promenades. The premises will be connected with the jetty by an iron lattice girder bridge, 10 feet in width. The architects are Mr. Mr. Thomas Andrews and Mr. Latham, the borough surveyor.

### GENERAL.

**The International Health Exhibition** will be opened by the president, His Royal Highness the Prince of Wales, on Thursday, May 8, at 3 P.M.

**The Original** of Raphael's *Madonna* of Loretto has, it is said, just been discovered in the Museum at Hyères.

**The Society of British Artists** have elected the following new members:—Mr. Jacomb Hood, Mr. Walter J. Morgan, Mr. Edward Elliot, and Mr. C. W. Wyllie.

**Mr. John Mason**, of Bilston, has offered to give his collection of paintings, numbering about sixty, to the town, as a nucleus for the formation of an art school or gallery.

**Mr. Herkomer, A.R.A.**, has exhibited at Messrs. Goupil's Gallery his *Pressing to the West*, with portraits and etchings.

**The Clothworkers' Company**, who have already given 3,500*l*. to the Bradford Technical School, have promised an annual subscription of 500*l*. towards the working expenses of the school.

**A Dwelling-house** in High Street, Spilsby, the birthplace of Sir John Franklin, was lately submitted to auction, and withdrawn under a reserve of 800*l*., the highest bid reaching only to 540*l*. The property, it is stated, was purchased some years ago by Lady Franklin for 2,500*l*.

**Duncombe House**, the mansion of Lord Feversham, is to be rebuilt from the designs of Mr. William Young.

**The Students** of the engineering classes of the Edinburgh University and the Watt Institution on Saturday last visited the Forth Bridge works, under the direction of Mr. Fairweather, C.E., B.Sc.

**A Peal of Bells** has been presented to St. Edmund's Church, Northampton, by Mr. W. Tones of that town.

**Tenders** for the erection of St. Bartholomew's Grammar School, Newbury, are to be obtained.

**Messrs. Stiff & Sons, Lambeth**, have been awarded a gold medal for architectural terra-cotta at the Calcutta Exhibition.

**Messrs. Legrand & Sutcliffe** have been awarded a first-class certificate and silver medal for their Norton's "Abyssinian" tube-wells and pumps. The exhibit was not in itself an elaborate one, but all appliances bearing upon the great question of irrigation are of paramount importance in India.



# SUPPLEMENT

TO THE

# ARCHITECT.

LONDON, MARCH 29, 1884.

## THE BUILDING TRADES EXHIBITION AT THE AGRICULTURAL HALL.

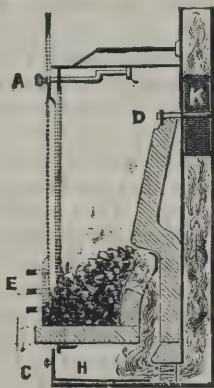


THE general arrangements of the Exhibition evince an amount of business capacity well worth imitation. Reverting to the exhibits, although, as we remarked last week, many changes are visible, we cannot say the appearance of the Hall lacks interest in comparison with previous years. Constructive materials appear as prominent as heretofore, though partly contributed by different firms, and wood working machinery and materials are fairly represented. The various appliances that help to make up interior decoration and their constituents are well worthy of careful observation, and ventilating and sanitary apparatus are to be seen in their most approved forms. The galleries—as was the case last year—contain a large collection of architectural drawings, many of which portray works carried out by well-known names, while others are studies, by new aspirants for fame, of different classes of buildings. If the martinet complains that there are exhibits not in strict consonance with the objects of the Exhibition, the answer must be that they are but few, and, if not strictly allied, are more or less attendant upon its primary features.

### Jaffrey's Patent Grate Co.

Amongst the new exhibitors may be mentioned JAFFREY'S PATENT GRATE COMPANY, 6 Charing Cross, who exhibit a patent grate that has already attracted some attention in other quarters. The invention of a gentleman at Manchester of the name mentioned, it was first introduced to public notice at the exhibition of smoke-abatement appliances held there in the spring of 1882, and its performances were so satisfactory under the tests carried out by Mr. D. KINNEAR-CLARK, the engineer appointed for that purpose, that a silver medal (the highest award given to any appliance exhibited there) was granted it. Since that time alterations have been made in it tending still further to increase its efficiency, and it is now introduced into the London market by the company that has recently been formed for developing the invention. By the aid of the two accompanying illustrations, our readers will be enabled to follow us in our description of its principal features. It is offered to the public as a smokeless, slow-combustion, and bright-glow grate, for either bituminous or anthracite coal, and it is remarkable for the rapid changes that can be effected from the one to the other of these applications. It has three actions. When first lit, the ordinary valve or register, which is balanced in the centre instead of at one of its ends, is opened, and a direct communication with the chimney effected. This, however, need only be continued for a short time, until the fire begins to show signs of vitality, when it may be closed, and a bright-glow, or slow-combustion fire, be obtained. This is effected by the peculiar construction of the grate. The body is composed entirely of fireclay, with a solid bottom, the back being formed of loose bricks of a semicircular form, projecting outwards, with interstices between them of about half an inch; and all these, including the body of the grate, can be taken in or out at pleasure. When the valves are closed, the smoke or gases from the fuel are mainly drawn through the openings we have mentioned into a combustion chamber at the back; but any that may be carried upwards have to pass down a flue at each side of the grate into the combustion-chamber before mentioned,

where, in connection with the great heat they come in contact with, they are mainly consumed ere they pass to the chimney. A second valve at the back of the grate opens or closes the entrance to the chimney from this part; and on this, shown by the letters b k in the sectional drawing, the slow-combustion



or bright-glow fire is mainly obtained. Although shown with a front in our illustration, the grate is made complete in itself without one, so that any style may be used for it, according to taste or circumstances; and it can also be arranged to receive fresh air from the outer atmosphere, and deliver the same into the room at any needful temperature. As a non-smokeless open grate it is certainly much in advance of most others, and as the only mechanism is the two valves, which are of the simplest order, there is nothing to interfere with the proper working at any time; and the ease with which the entire body (of fire-clay) can be taken to pieces, even to the iron shell, new pieces can be put in whenever they wear away by any unskilled person, and the whole laid bare for sweeping out or cleaning. We may also add that, as in the case of all grates composed of fire-clay, it throws out great heat, and, used as a slow-combustion one, is a great economiser of fuel.

### Messrs. Hindley & Sons.

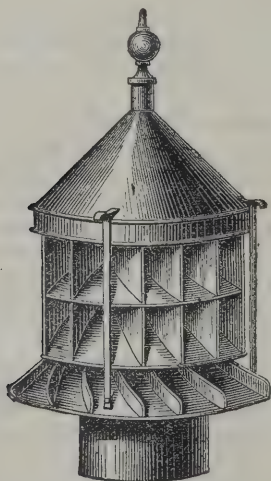
We are always led to expect an artistic display at the stand of Messrs. HINDLEY & SONS, of Oxford Street, and the firm have not disappointed us, although they have on this occasion confined it entirely to chimney-piece suites, and Japanese leather wall decoration. In all six suites are shown, and they are arranged in a tastefully-designed stand, covered with a handsome English-made light chintz pattern, with suitable frieze, &c. The mantelpieces are all of pine wood painted in different colours, from designs by Mr. C. A. BEVAN, who has gained great popularity as an artist in interior decorations. The aim of the firm has been to show the very economic price at which a really artistic and well-made mantelpiece can be turned out by first-class London workmen. In design, while mainly following the style of ornament appertaining to the "Queen Anne," the artist has endeavoured to free them from what we may term the "severe" lines attendant upon it. The centre one is a full-sized mantel and over-mantel in ivory white, containing four cabinets, with bevelled plate-glass doors the back of the other portion of the over-mantel being lined with plush, the shelves being embellished with a chaste selection of pottery. A Berlin black hob-grate of suitable design, flanked with Bardella marble slips, completes the suite, the



intense black of the grate throwing the creamy tint of the mantelpiece out in strong relief. There is another full-sized one of the same colour with one cabinet and an oblong plate-glass mirror, and a variety of shelves for ornaments. The back of this is lined with a dark olive-green plush. It is also fitted with a Berlin black hob-grate, and forms a most attractive suite. A very pretty boudoir suite is also noteworthy, the colour being that popularly known as a duck's-egg green. It is fitted with a circular mirror with bevelled edges, the panels of the over-mantel being lined with Japanese paper. A small quaint grate lined with fire-brick, and flanked with "Rouge girotte" slips, accompanies this. A fourth set is adapted for a dining-room or library, and is coloured in one of those new neutral tints so difficult to exactly define. In saying it is somewhat between a slate blue and a peacock blue we give the best illustration we can. The panels of this are lined with Japanese paper, an oblong bevelled mirror, oblong in shape, adorning the over-mantel, which also contains brackets, &c., for ornaments. The popular crushed-strawberry colour has not been overlooked, the remaining two being coloured in that tint. One of these is a boudoir set, fitted with a slow-combustion grate and pale green tiles, and the effect is remarkably good. The other, the most simple in the exhibit, is intended for a bedroom, and with a neat canopied slow-combustion grate can be sold, we understand, at the low price of 3*l.* 5*s.* The Japanese leather decorations, for we cannot call them paper, as they are made from a fibrous material, composed, we believe, of the bark of trees, are all from the Government manufactory, and have been introduced by the firm for the purpose of competing with decorations of a somewhat similar character that are manufactured here, and have attained much popularity. They are, perhaps, better adapted for dados than for entire wall-covering; the designs are good and very effective; some with old gold grounds and floral patterns will no doubt meet with many admirers. Messrs. HINDLEY were one of the first firms to introduce us to Japanese papers, and have done a great deal to familiarise us with them, and they appear equally determined to lead the van in the new style of decoration from that distant region.

#### Messrs. J. M. Lamb & Co.

Messrs. J. M. LAMB & Co., Sanitary Ventilating Engineers, 119 Finchley Road, N.W., who have recently come to the front in this class of appliances, have a well-filled stand composed of their different specialities. A complete collection of their "Triumph" ventilators form the most prominent feature. These are made in various sizes and for varied uses. For houses and factories they are shown with single, double, and treble rows of exhaust openings, with smaller ones adapted for soil-pipes, railway-carriage roofs, &c. Our illustration shows a double one, and its shape and arrangement applies to all.

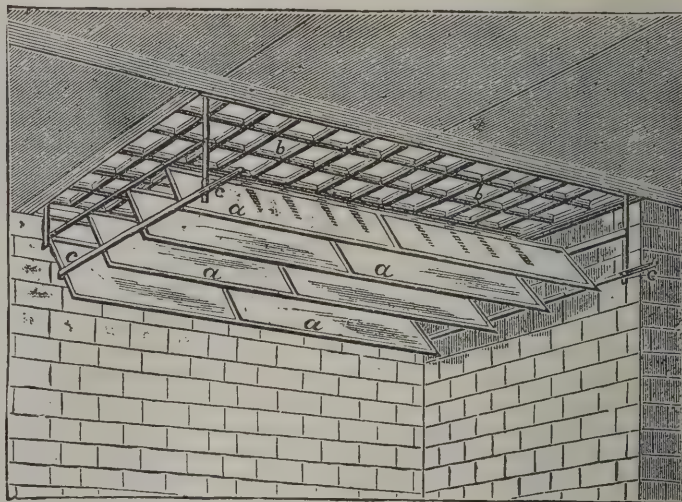


There are also three different patterns of the "Triumph" smoke-curing chimney-cowls. Noiselessly rotating on a hardened steel spindle in a cup of the same material, they are constructed with a set of guides that conduct the air over the mouth of a fixed cone in a concentrated spiral form, and a revolving cone-head divided into segments that collect all the air with which they come in contact, twisting it over the mouth of the cone and condensing it to double pressure, making the centre of the ventilator the strongest point of action, and

causing it to draw off the vitiated air on the off side. The inventors claim that the exhausting power of the "Triumph" ventilator exceeds that of any other ever invented, and that only a powerful up-current can exist wherever they are fixed. The power is increased by adding to the tiers of cones, each one clearing the row below it, and when once fixed they require no attention but an occasional oiling. The chimney-cowls are guaranteed to be proof against the entry of snow or rain, and noiseless in the heaviest gale. A new smoke-curing cowl is exhibited here for the first time, called the "Standard." It works in a similar manner to the "lobster back," while retaining the general feature of the "Triumph," and is said to have effected its purpose in a most satisfactory manner in all the experiments to which it has been subjected. Another new invention shown by Messrs. LAMB & Co. is a patent "Tripod" cowl and ventilator. This is a fixed appliance intended to meet the objections of those who object to movable apparatus of this class. The action is necessarily automatic. The wind that is blowing to terra-firma is conveyed through both ventilator and cowl, but exhausts itself through a powerful compressed descending current of air, which produces through the various discharge openings a strong induced up-current. They are shown in three kinds, and appear to produce a great amount of free exits for smoke while the wind appears to be driving down the flue. Soil-pipe ventilators on this principle are also exhibited. Mr. LAMB has just taken out a patent for a new centrifugal fan, seen here for the first time. It requires to be driven by steam or some other motive-power, and is intended for removing or displacing large bodies of air in mines, tunnels, &c. It is very light, and requires but a small amount of power to drive it, and it is claimed that it will effect a greater change in the atmosphere than any of its class now in use.

#### Mr. Wm. Brass, Jun.

Mr. WM. BRASS, jun., 47 Old Street, St. Luke's, shows his improved patent pavement lights and patent plaster ceiling slabs. The former, though comparatively new, are becoming well known. We append an illustration, however, which shows at once its action and use. A series of silvered glass reflectors



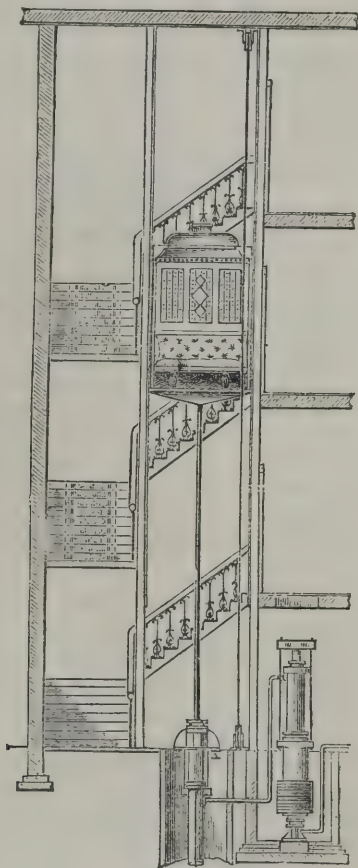
(weather proof), with waved or fluted surfaces to render them as powerful as possible, are attached to the under or inside of the pavement, stallboard, or stair-tread grating, as the case may be, and being hung on centres, and having connecting rods at each end, can be adjusted to any angle required, and so diffuse the light into an underground apartment to the best possible advantage. A very important feature that must not be passed over in Mr. BRASS's pavement lights is the special arrangement made for suspending the reflectors in positions in which the depth of lintel below pavement level, or some other obstacle, renders the old form of pavement lights next to useless, so providing daylight to apartments that have hitherto been complete strangers to that commodity. The improved slab plastering shown at this stand has advantages that should not be lost sight of. It is composed of plaster and fibre with stout canvas as a strengthening medium. It is made about half an inch thick, and for ceilings is supplied in slabs three feet square, but it is equally applicable for girder casing and other purposes, and can be had any required size. The saving in time is very



considerable, as it dispenses with the two first stages of the plasterer, it merely requiring to be nailed up and then finished off.

**Messrs. Waygood & Co.**

Amongst the several new industries that have of late years obtained a prominent position, and that the altered condition of our surroundings will probably increase for a long time to come, is that of lifts and hoists. Messrs. WAYGOOD & Co., Falmouth Road, S.E., who are exhibitors here, have attained a position second to none in their manufacture, and the articles on view are composed entirely of these appliances, and the gearing connected therewith. In using the term "lift" we adopt a word of expansive character, for it is applied indiscriminately to the most simple contrivance for raising food from the kitchen in a private house to those for enabling us to be carried from floor to floor in a high range of buildings, or for transporting heavy weights in warehouses from basement to roof. It must be evident to all that such appliances in which human life plays a conspicuous part should be not only securely guarded against accident from falling through openings, but that the machinery should be of such a nature as to render danger to life or limb impossible in the event of anything becoming wrong in the propelling power. It is not every arrangement in connection with these necessities that can boast of this immunity, and the public prints from time to time place on record accounts of accidents that ought not to be possible of occurrence. The lifts made by this firm can be supplied to work by hand, gas, steam, or hydraulic power, of any required size, and in the case of those for hotel use upholstered in the most luxurious manner. Our illustration depicts a small patent hydraulic balanced lift, of which large numbers have been erected in London and the provinces.

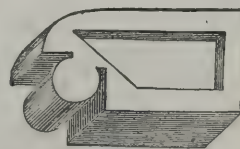
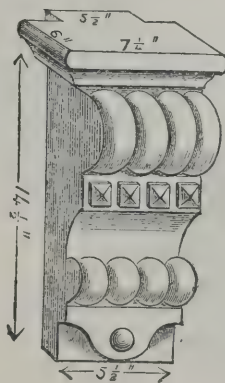


Should our readers wish to see these appliances at their everyday work, a visit to the City Offices Company, 39 Lombard Street, or to Eastcheap Buildings, Eastcheap, they will no doubt be gratified. They are especially adapted for fixing in the well-hole of a staircase. No head gear being required, the appearance of the staircase is preserved, no light obstructed, and absolute safety, the most important feature of all, is obtained. Two useful points gained by the use of these lifts is smoothness of action and increased speed without danger. Some of them, now in course of erection in the metropolis, are being arranged to be worked from the high-pressure mains of the General Hydraulic Power Company, for which they are specially suited, on account of the economy

effected in the quantity of water used. Another example exhibited is a hand-power lift, fitted with the firm's patent self-sustaining brake, securing again perfect safety against accident. This can be arranged for ropes or chains, though the former are recommended. By simple mechanism the load is held stationary immediately the hauling-rope is released, which obviates the necessity of a separate brake-rope; and in the event of the rope breaking the safety apparatus is at once brought into action, which may be thus described. On each side of the box two wrought-iron plates are bolted, with a vertical slot in each, in which the crossbar at the top of the box works; and until this reaches the top of the slot the box is not lifted. When it has arrived at this position it distends four cams, viz. two on each side, and should the rope break the bar drops of its own weight, and, to make security more sure, two strong springs act upon the cams, grip the uprights, and the cage or box is suspended in almost the position in which the breakage may occur. A double dinner-lift of somewhat similar arrangement is also exhibited, the brake acting equally well upon either box whether loaded or empty. A single dinner-lift worked from below by a handle and suitable for private houses, capable of carrying as much as 84 lbs. at one time, and of a very inexpensive character, completes the collection of these appliances, and the exhibit is supplemented by two complete sets of gearing, showing the whole of the media employed, and which the firm keep in stock, to suit cages from one to three feet square and for weights up to one and a half hundredweight. Very complete catalogues are issued by Messrs. WAYGOOD & Co., containing a number of illustrations of hoisting machinery suitable for the most diversified uses.

**Messrs. Candy & Co.**

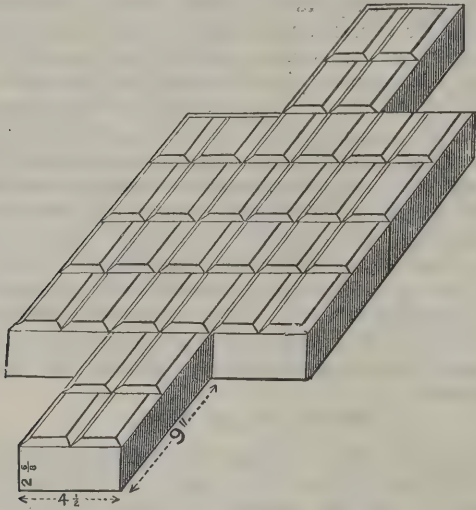
At Stand No. 210, Avenue F, Messrs. CANDY & Co., Limited, of Newton Abbot, Torrington, and Bideford, Devonshire, have an excellent display of their terra-cotta facing bricks and brick ornament, and other articles made of their celebrated clays. There is probably no finer material found in these islands than Messrs. CANDY can boast of in their various properties, and the supply is so apparently inexhaustible that it places them in a position as regards price, when we take into consideration the imperishable nature of even their ordinary bricks, that they may be said to compete in price with the most inferior makes, and for many of the uses to which carved stone is now applied in buildings, their terra-cotta can be supplied at such a price that is bound to cause the former to be displaced in the market to a great extent. These clays are rich in silica, showing by analysis to contain as high as 87 per cent., whereby twisting and warping is avoided, and the material can be safely fired until it becomes a non-absorbent and semi-vitreous body, with the advantage of retaining its colour and freshness which can either be had in white or warm tinted buff. The firm are enabled to supply a facing brick of



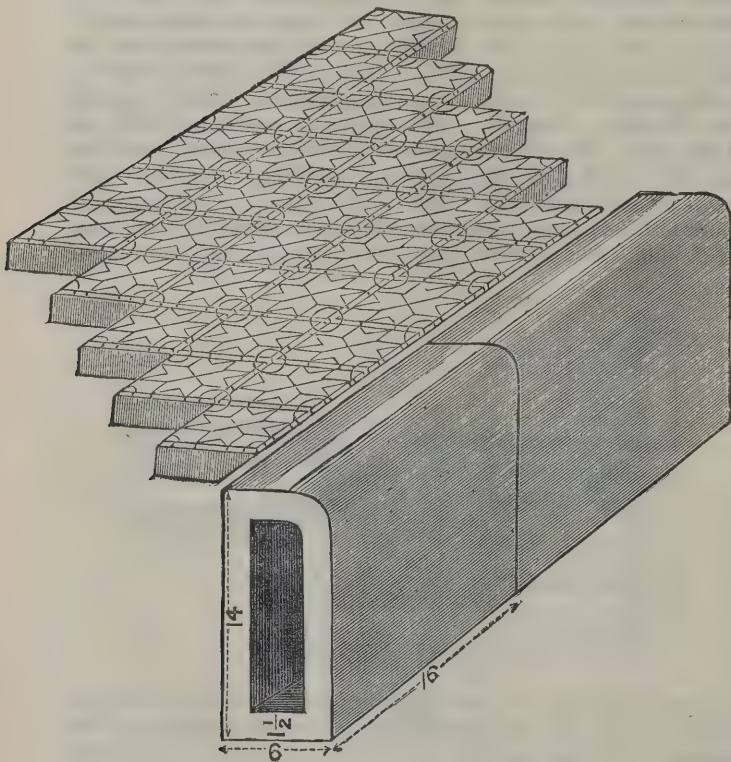
the quality we have named suitable for best work as low as 42s. per 1,000. In ornamental work the great economy of the material is still more apparent. A truss of the size depicted in the accompanying illustration of this imperishable terra-cotta can be delivered in London for 2s. 6d. The cost of carving such a body in stone would, we believe, cost about four times as much, and drip bricks of the character of the one illustrated can be supplied at a proportionate price. Architects cannot fail to appreciate the value of this material for their work, not only as regards price and lasting qualities, but on account of the saving of time effected over that taken up in the carving of stone. As a proof of the



astonishing hardness of these clays, they are yearly exported in their crude state in large quantities to different parts of the kingdom and abroad for the manufacture of chemical-holding vessels, the most powerful acids and alkalies, as well as the most severe frosts, having no injurious effect upon them. KIRKALDY'S tests have shown that CANDY & Co.'s facing bricks resisted a crushing pressure of over 440 tons per square foot, which is double that of ordinary building stone, and for these and their other advantageous features they have been selected by the Government for the construction of docks. Another use to which this non-absorbent brick has been extensively applied is for the paving of stables, &c., their white colour materially assisting the light for these purposes. We append an illustration of a pattern mostly used, and we understand



the London General Omnibus Company are now generally adopting them. For footpaths, steps, &c., they are equally applicable, and the variety of patterns in which they can be made without additional cost is likely to render them more popular. Our illustration gives a favourite design, the prices



being about that of the common Staffordshire blue brick. The firm are also most extensive manufacturers of salt-glazed sanitary pipes and traps of all descriptions, which are also shown in their many varieties, and these being made from the same clays, our previous remarks apply equally to them. Besides the clay we have mentioned their estates contain a very valuable body of fireclay, which is made into the various articles for which that substance is used, and has been

supplied both to the English and foreign Governments, various gas companies, Portland cement works, &c., being particularly suited for intermittent heat, and for resisting the destructive action of salt glazing in pottery, kilns, and chemical works. Numerous medals have been awarded the firm for their general superiority, and a few minutes devoted to an examination of this stand must result in advantage to those interested in this class of manufactures.

#### Messrs. Archibald Kenrick & Sons.

Messrs. ARCHIBALD KENRICK & SONS, Limited, of West Bromwich, occupy as last year a central position on the ground floor, and is so arranged that both the in and outside of a square erection is utilised for exhibiting the many articles coming under the head of builders' ironmongery and domestic articles in cast iron manufactured by the firm. Covered with a chocolate-coloured cloth, giving an air of extreme gentility to the exhibits, the erection is divided into panels, on which are arranged, in some instances in a most artistic manner, the different examples of their art. Commencing with the most inartistic articles, there are several examples of HATFIELD'S patent rollers for heavy doors, too well known to need detailed description here. Hinges of all descriptions that are made in cast iron, from the smallest butt to the largest of the same class, are arranged to please the eye, and the larger kinds of ecclesiastical and mediæval design form a separate group. The somewhat uninteresting, but nevertheless useful, "pulley" is shown in the many forms and sizes in which it is manufactured, and is robbed of its unattractive character by the manner in which the various examples are displayed; and the firm call particular attention to their patent secret axle pulley, that offers great advantages over that of ordinary make. This pulley, which is cast with its runner in one piece, is again used in casting the bearing, and by this means a chilled or hardened bearing is obtained, which causes them to run more easily, prevents friction, and lasts a much longer time. Arriving at the more ornamental kind of fittings, we find cabinet handles of all kinds and sizes, flush bolts, brackets, knockers; postal plates, which comprise a door-handle and letter-plates, the designs of which are equal to the most costly articles of the same character made of brass, and coloured in a variety of ways, including nickel-plating, electro-bronze, verd antique, &c., the designs being decidedly American in character—that is to say, the main portion of the pattern is sunk, the heavier lines being ground with a flat surface. This style of casting is very effective, and has found considerable favour on this as well as the other side of the Atlantic. A variety of patterns of ventilators of different shapes and sizes of the same style of casting illustrate a vast improvement on the old times, and there are several patterns of umbrella stands of light and elegant design, in which a combination of nickel plating and Berlin black or bronze are blended with much taste. The exhibit is supplemented with a variety of useful domestic and culinary articles and enamelled sanitary ware in sinks, lavatories, &c.

#### Messrs. Shanks & Co.

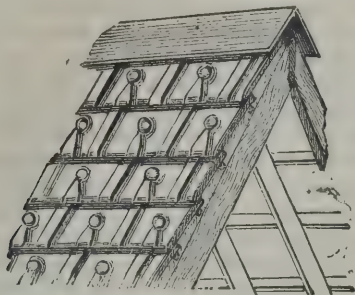
As manufacturers of baths, lavatories, and their accessories, there is probably no firm who has earned so large a reputation as have Messrs. SHANKS & Co., Barrhead, near Glasgow, and London. Retaining about the same position in the hall as at previous Exhibitions, they are showing at Bay 10 a well-selected collection of the above goods, as well as one or two new features which must not go unnoticed. Prominent among the latter is a patent water-waste preventer, adding to the already long list of these apparatus, and, though late in coming into the market, is by no means the least meritorious. It is on the syphon principle, and quite free from valves or complications that would render it liable to get out of order. The patentees claim it to be the most simple and certain of any yet introduced, and without endorsing that statement entirely—as we know many very simple and efficient ones—it will doubtless hold its own against any with which it may be brought into competition. Another novelty is a glazed fireclay wash-out closet and trap, all in one piece, the special advantages of which are its extra strength and consequent non-liability to breakage. The "Eureka" bath is again a source of much attraction, and though it has been described in our columns on previous occasions, as it possesses rather unique features, the reiteration of them will not be out of place. As will be remembered, it is one that combines plunge, spray, shower,



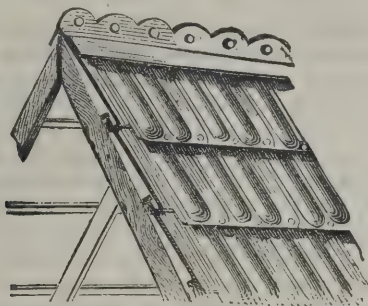
and douche, with fittings for hot and cold water, but instead of having sixteen pipes, as hitherto found necessary, only six are required. This is effected by means of a dial with an index, which merely has to be pointed to the name corresponding to the particular bath desired, and then by turning the hot or cold water on as occasion may require. There is thus a saving of piping and expense in fixing, as well as a saving of time to the person using the bath. Lavatories in a variety of designs, from the most costly to the least expensive, occupy a large portion of the stand, and with other kinds of baths, butlers' sinks, &c., maintain the firm's established credit for elegance, finish, and moderate prices.

**Mr. C. D. Phillips.**

The interest hitherto evinced in the patent lock-jaw tiles of Mr. C. D. PHILLIPS, Emlyn Works, Newport, does not appear to decrease. The position of the stand for obtaining a full view of the roof is a much better one than was occupied last year, and it is only paying a just tribute to the invention to say



that the ornamental merits of this tile are only second to the useful. We have illustrated two of them, Fig. 1 being a single grip, and Fig. 2 a double grip, the latter being the most suitable for exposed situations, and when they are finished with suitable ridges and finials, have, to say the least, a very ornamental



appearance. The salient features of the "Lock-jaw" tile, viz., the manner in which each locks into the other at top, bottom, and sides, and so secures a thoroughly wind and rain-proof roof, are now generally known, but it may be as well to mention that half-tiles are made, to hang next to a gable, in alternate course, similar to the mode of using closers to brickwork. No mortar is used with them, nor is skilled labour necessary. An important feature with the lock-jaw tile is the great reduction obtained in weight, which is about one-third that of ordinary tiles. That these advantages are fully appreciated the constantly-increasing demand for them testify.

**Messrs. Diespeker & Co.**

Mosaic flooring is contributed by Messrs. DIESPEKER & Co., of the Holborn Viaduct, and the examples are numerous and in most instances of a high order of merit. With their headquarters at Venice, and branches at Vienna and other Continental cities, the firm have ample opportunity of studying the works of the old masters, which they have not been slow to avail themselves of. Extending their operations to England by establishing a branch dépôt at the address named, they are making considerable progress here, many architects of repute having called their aid into requisition. Amongst the specimens shown is one as laid down at the Glasgow University, and at Hints church, near Lichfield, to the order of JOHN OLDRID SCOTT, Esq., F.R.I.B.A. This is a plain Roman border, with Pompeian corners and Roman mosaic centre. Another example is in Roman mosaic, representing a vine leaf, with border of the Elizabethan period, and Venetian (Mischiato) centre, as laid at the Hyde Park

Mansions, for Messrs. WHEELER & WARREN; a third specimen showing a Roman border, Moresque in style, as furnished to GATTI'S Music Hall, the architect being A. J. BOLTON, Esq., F.R.I.B.A. These are but a few of the very many patterns exhibited of equally good design, the blending of colours being strikingly harmonious. Besides these higher-class designs there are many of a less expensive character, all, however, being made of marble, as except for wall or ecclesiastical decoration, where glass is partly brought into requisition, the firm only work in marble. As an example of the low price at which the firm can supply a marble mosaic flooring, one is exhibited that can be laid down and finished for 8s. per yard, a price that will compete with the lowest class of tiles, and more durable. The cheaper kinds are as lasting as the highest-priced ones, the only difference consisting in the more elaborate design, all being laid in a specially-prepared mastic of Messrs. DIESPEKER'S invention, which renders the facing practically imperishable. The ecclesiastical designs are in some instances reproductions of well-known works by old masters, and show that workmen of no mean order are in the employ of the firm. Catering for the style at present in vogue in England, of introducing tiles and slabs into grates, some elegant designs of the latter are shown at prices, too, that will again compete with tile specimens. As an artistic display of one of the earliest arts this exhibit commands attention and respect.

**Mr. R. Adams.**

Mr. R. ADAMS, 7 Great Dover Street, S.E., occupies his usual position, which has been somewhat extended to enable him to exhibit a new patent improved fan opener, closer, and fastener, of which we give an illustration of the working parts. This demand for a less expensive opener than the one originally patented by Mr. ADAMS, of which an immense number have been sold, and will no doubt continue to be, when price is not an object, has led to the introduction of the present invention.



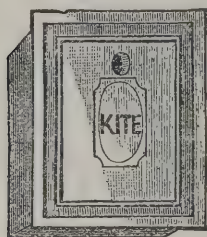
A jointed folding-rack as shown in the drawing is fixed above the fanlight, into which a worm is made to revolve by means of an endless cord passed through an ordinary rack-pulley, fixed and used as to a common blind. The fanlight can be made to open inwards or outwards, and from bottom or top, according to the manner in which it is hung, and the appliance offers a cheap and effective means of opening or closing "lights." Another new feature exhibited here for the first time illustrates an easy and inexpensive mode of altering existing windows to the principle of Mr. ADAMS'S patent "anti-accident window," enabling them to be swung and turned over for cleaning from the inside. This is effected by making a slit in the sash and in the sash frame, into which a metal tongue is slid, and that does not interfere with the opening of the window; at the same time it prevents draughts from finding their way through, and the window from shaking. The sash is also pivoted in the centre, and on withdrawing the tongues the sash can be swung as before described. This arrangement can be carried out at a small cost, and places any window so altered on the same basis as the "anti-accident." From the number of accidents that yearly occur through the dangerous practice of sitting outside, it is to be hoped that the contrivance will secure a large amount of patronage. We have in addition all Mr. ADAMS'S specialties, including the "panic door" door springs and check slams, improved Venetian blinds, and "Toby" cord holder, secure sash fasteners, patent lock furniture, &c., all of which have been mentioned in the columns of *The Architect*. There are also



specimens of cheap and good English-made rim and lever locks well worth the attention of builders. Mr. ADAMS has a fertile brain, which the many inventions exhibited (all his own) practically demonstrates.

**Messrs. C. Kite & Co.**

Messrs. C. KITE & Co., ventilating and sanitary engineers, Chalton Street, N.W., show that they are not behind their many competitors in the application of their system to different kinds of buildings. They exhibit several turret ventilators, and drawings of several others. Amongst the latter we may mention designs of those just finished for the new Warwick School Board buildings, in which the horizontal roof ventilator is made in a vertical form, at the suggestion of the architect, Mr. GEORGE H. COX, of Temple Row, Birmingham, and is arranged to prevent the admission of light, &c. Another turret is shown as made to the order of Mr. C. H. HOWELL, County Surveyor for Surrey. The examples demonstrate that the firm are enabled to assimilate their designs to different styles of architecture, while securing the free play of their special features. Their several features in drain and cess-pit ventilators, chimney-caps, &c., are also shown, and others for cow-houses, stables, &c. A further speciality, that has been thoroughly tested by the Sanitary Institute, and that has gained the medal of that body, is their improved chimney-breast ventilator, and the improved fresh-air inlet ventilator, which are shown below. The illustrations show the area over which the air travels, and



they are extensively in use. Amongst other architects Mr. ERNEST TURNER, F.R.I.B.A., and a member of the Council of the Sanitary Institute, has specified for a large number of them.

**Messrs. Wm. Woollams & Co.**

The collection of non-arsenical wall-papers shown by Messrs. WM. WOOLLAMS & Co., of High Street, Manchester Square, merit all that is claimed for them, both as regards their design and their non-poisonous and sanitary features. They consist in the main of wall-papers, dado decorations, raised flocks for painting over, patent embossed flocks, damask and chintz patterns on mica grounds, &c. The central object in their stand represents a handsome Italian brocade pattern designed by Mr. A. SILVER, printed in six different coloured flocks on a gilt diapered ground, and is a fine example of colour printing. A somewhat similar design to the right of this—though smaller in scale—is composed of flowers, leaves, &c., treated conventionally in shades of blue and green on terra-cotta, and arranged as a dado decoration, the design being by Mr. BERNARD DICKSEE. A most efficient and inexpensive decoration for corridors, staircases, &c., may be seen to the left, emanating from Mr. A. F. BROPHY, worked as a single print in shades of terra-cotta. At each "return" of the stand are two other dado decorations, both distinctly Italian in character, the one on the left having a panelled dado and a fine block damask filling taking a 36-inch repeat, from the pencil of Miss LOUISA AUMONIER, the one on the opposite side having a bold and striking frieze, flamboyant diaper filling, and geometric dado of Veronese character, and it finds an excellent companion in a rich, raised flock ceiling paper, specially designed for it, both having been drawn by Mr. H. NOBLE for the firm. A great number of other ceiling papers are also shown, the most striking of which is, perhaps, a design by Mr. OWEN W. DAVIS, with a repeat 42 inches by 42 inches. There are two very notable chintz papers, recoloured to suit modern requirements, from two very old, many-coloured designs. These are on mica grounds. This material, powdered, has become a very powerful factor, under skilful manipulation, in producing decorative effects, resembling silk in appearance more nearly than the old satin papers, and being perfectly innocuous and practically imperishable. There are, in addition, two exqui-

site damask patterns, one in Van Eyck red, from the pencil of a lady we have before mentioned, Miss LOUISA AUMONIER, and the other in yellow and coloured flocks on yellow diapered ground, a reproduction of the work of a designer whose name has, unfortunately, not been preserved. It is almost needless to add that art, of no mean order, is visible in all the designs we have named, and Messrs. WOOLLAMS again demonstrate their capability to produce the most exquisite designs and colours of every shade that are perfectly innocuous, and a great number of them reliably washable.

**Pennycook Glazing and Engineering Company.**

Glazing without putty is again illustrated by the PENNYCOOK GLAZING AND ENGINEERING CO., LIMITED, of Glasgow, and 57 Chancery Lane, whose system has been described in the columns of *The Architect* on previous occasions. Generally speaking, it combines the advantages of the lead and zinc modes without their individual defects. Its advantages are comprised in the peculiar section of which the sash bars are formed, giving the maximum amount of strength with the consumption of a minimum quantity of metal, and the addition of a double gutter to each bar, designed to carry off all moisture condensed on the inner surface of the glass. The latter is kept in position by simply folding down a series of narrow flanges of sheet lead rolled in with whatever metal the sash bars are made of, and broken panes can be replaced by any unskilled person with ease and rapidity. The many public bodies, including the Government, who have adopted this system, and who still continue to use it for new works, is the best proof that can be given of its value, and its general application to domestic greenhouses, &c., would be the means of removing a great amount of inconvenience.

**Messrs. F. Rosher & Co.**

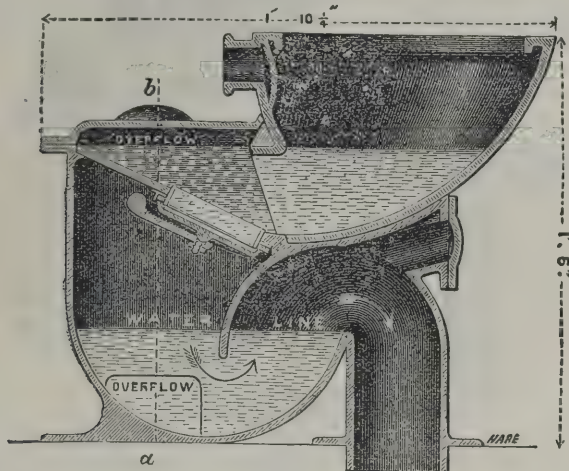
Messrs. F. ROSHER & Co., brick and tile merchants and manufacturers, Sittingbourne and Northfleet, Kent, Upper Ground Street, Blackfriars, and of other London wharves, are again well to the fore with a collection of their varied wares. Visitors to last year's exhibition will doubtless remember the elegant structure then erected by this firm, with the object of showing the effective yet inexpensive ornamentation that could be produced with fancy and moulded bricks. Although the exhibit is differently arranged this year, the goods are the same in quality, and the variety is as great as heretofore, their well-known white Suffolk moulded, facing, coping, and arch bricks alone comprising upwards of three hundred designs, all of which are also made in the dark and bright red colours. In roofing tiles Messrs. ROSHER & Co. show some examples particularly worth notice. They are made both plain and fancy, and have the appearance of the ordinary Yorkshire tiles; but the special feature is in their being pressed. This gives them a cleaner surface, and also renders them lighter, yet without reducing the strength. They are holed and nibbed; but the nibs, instead of being thumbled on, are produced in the pressing, thus giving them the utmost solidity, and lessening the chance of their being knocked off. Ridging, finials, &c., of similar durability are made to match, and the price is but a trifle more than the Yorkshires. PHILLIPS'S patent lock-jaw roofing tiles, made under license by Messrs. F. ROSHER & Co., of this same clay, demonstrates the impervious nature of it in the following manner. A wooden frame is hermetically fixed around one side of a tile so as to contain and keep water in contact with it, but which is not absorbed in the smallest degree by it. Any of these goods can be delivered direct from the works at Ipswich by barge in Thames or elsewhere, at about one-third the minimum railway rate. The various felts, including roofing, sarking, ship sheathing, dry hair felts, &c., manufactured by JOHN ROGERS of Belfast, and which are of reputed quality, form another item at this stand, Messrs. ROSHER & Co. being the sole agents, as they also are for GOODDY'S patent flexible jointed sanitary pipes. The special feature of the latter consists of an elastic and impervious collar, fitted in the socket for the purposes of jointing, and, no cement being required, the whole drain is rendered pliable, and less liable to fracture. The goods made at the Rowlands Castle Brick and Tileworks, which have long been known for their uniform colour and exceptional soundness, are now exclusively supplied by Messrs. ROSHER & Co. New plant has recently been laid down and a change taken



place in the proprietorship and management. Samples are on view at Stands No. 202 F and 241 G, respecting which application should be made to Messrs. ROSHER & Co.

**Messrs. R. F. Dale & Co.**

Messrs. R. F. DALE & Co., 1 Bear Lane, Southwark, have again placed their exhibit in the prominent position of Bay 1. From the conspicuousness of this stand it cannot well be overlooked, and it is therefore gratifying to note it occupied by no second-rate firm. But there appears to be a deficiency both as regards assortment and the quantity of goods shown, as compared with their display in former years, and the articles appear to have been taken indiscriminately out of stock with a view more of filling up the allotted space than for the purpose of demonstrating their various merits, which is so far to their credit, as showing their general good finish and quality. The following engraving shows their "European" side-outlet valve closet, which has been described before in our columns. It



appears to possess in combination the individual advantages of "flush-out" and "valve" closets, and though introduced but little more than a twelvemonth ago, it is already in very large demand. Their patent ball-valve recommends itself on account of the simplicity with which it can be put right should the washer in the course of wear-and-tear become leaky. In the event of this happening, it can be readjusted in a few moments. Pumps of various kinds, baths, plumbers' and other brass fittings complete this collection.

**Messrs. W. H. Lindsay & Co.**

Though small in size, the exhibit of Messrs. W. H. LINDSAY & Co., South Wharf, Paddington, and Sandymount Foundry, Llanelly, is perhaps one of the most important, from an engineering point of view, in the building. Before proceeding to discuss this portion of the exhibit, a few words *en passant* as to their patent reversible treads and landings will not be out of place. We are glad to find them increasing in use every year, and wherever they are laid they give entire satisfaction. We are accustomed ourselves to meet with them daily, and can testify to the pleasant sensation experienced in walking over them, while their durability is beyond doubt. Made of very hard wood, in either a small oblong or cube pattern, they nevertheless appear to give an elasticity to the tread which is wanting on plain boards, and, being laid in blocks of a certain size, whenever the one side is sufficiently worn away to render a change necessary, being grooved both sides alike they have only to be turned over to present an entire new surface, or the worn side may even be planed down, or, in the case of stairs, the back ones can be brought to the front of the riser, and those that have performed their duty in that position be placed at the back. For these and other reasons that need not be now entered upon, they undoubtedly form the most pleasant and lasting tread now before us. Turning to the engineering department of this firm, we find some valuable features. Their patent wrought-iron sashes, with bosses of the same material, are so arranged that the latter obscure but the merest minimum of light, and the sashes can be glazed flat, like ordinary wooden ones, without necessitating the chipping of the panes at the corners. But the most important feature, and possessing great interest to engineers, architects, &c., is Mr. LINDSAY'S patent steel troughs or deckings for floors of bridges, &c. These are formed by utilising rolled sections of

splayed channel steel, so that the top table shall be thicker than the sides, in order to approach the theory of the girder principle as much as possible, by which means the metal is taken away from the web and added to the flanges, increasing the sectional strength of the trough and producing a greater moment of resistance over a floor which is composed of an uniform thickness of plate, without increasing the weight of steel to the square foot of area to be covered. By simply rivetting the trade rolled sections together with a single row of rivets, at such a point in them where strain is almost neutral, the cost of manufacture is reduced to a minimum and the requisite amount of strength obtained. Mr. LINDSAY has utilised this application so widely that he makes a section sufficiently light to construct watertight roofs, strong room floors, &c., while they are graduated upwards to others capable of bearing the strain of the heaviest railway trains on bridges or railway floors. Being made of mild steel the weight is considerably reduced, and for the latter-named uses is capable of sustaining an ultimate strain of not less than 30 tons per square inch, with an elongation of 20 per cent. A further collection in this exhibit is a display of hammered ironwork in railings, grilles, panels, &c.; one of the latter, in a frame of wood, forming a portion of an entrance-door, being remarkable for its bold conception and delicate tracery, showing that the art in which QUENTIN MATSYS excelled has worthy followers amongst English workmen of the present day, for we are assured that native talent in this department is exclusively employed by the firm. Messrs. LINDSAY & Co. have just been awarded a first-class certificate and silver medal at the Calcutta Exhibition for their patent decking and improvements in construction of railway bridges.

**Messrs. T. Lawrence & Son.**

MESSRS. T. LAWRENCE & SON, of Bracknell, Berks, again contribute an attractive little erection composed of gauged and carved brickwork and house and wall tiling, which was exhibited here last year. We are told that the building has been placed in a most exposed position since, the object being to prove what the firm particularly claim—that weather has no injurious effect broadly speaking upon the materials manufactured from their clay, which is a rich red. On each side of the erection are two bold carved brick panels or shields, with borders of well-executed foliage, made for some buildings now being erected in Bracknell. As a specimen of what can be done in carving bricks where a good material forms the base, these are certainly very commendable objects. The base of the house is made with hand-made pressed facing bricks, in which the well-known colours of the firm—orange, cherry, red, and rich dark-red—are harmoniously blended, and there is no denying the fact that the bricks made by this firm hold as high a position as any that are made.

**The Papier-Maché Company.**

The display of the PAPIER-MACHÉ COMPANY, Wellington Street, Strand, is of a most artistic character. Largely composed of fibrous plaster, the manufacture of which is generally understood by the profession and trade, we are introduced to a facsimile of a portion of the ceiling made of that material by the firm for the Great Eastern Hotel, Liverpool Street, showing cone, pendants, &c., and the arrangements for ventilating. There is also a specimen of an Elizabethan staircase panel, and pediments for door made for the same building from designs of the architect, CHARLES E. BARRY, Esq. A segment of a large centre-panel for ceiling is shown, so modelled that it can be arranged for ventilating if desired. Another conspicuous feature is a replica of a bold Corinthian capital made for a public building at Cape Town. All these are in pure white, and there are several elegant centre-roses in papier-maché of the same colour. One of the applications for which the fibrous plaster has been brought into requisition, is for mouldings to the panels of saloons in steamships, the advantages obtained being the prevention of damp, and on this point the company have received some gratifying testimonials. In papier-maché the company introduce us to a life-size figure of *Hebe*, weighing only 72 lbs., the finish of which is as clear and sharp as if sculptured in marble. The remaining feature in this artistic collection is a mantelpiece composed of fibrous plaster and papier-maché. This is a good specimen of Queen Anne design, and is coloured in two shades of low-toned greens with gold ornamentation. The extreme lightness of fibrous plaster,



its non-liability to crack, its fireproof qualities, and the fact that ordinary plastering can be dispensed with and the fibrous material screwed on to the joists, render it one of the most inexpensive, and, at the same time, effective materials for decorative purposes we could select.

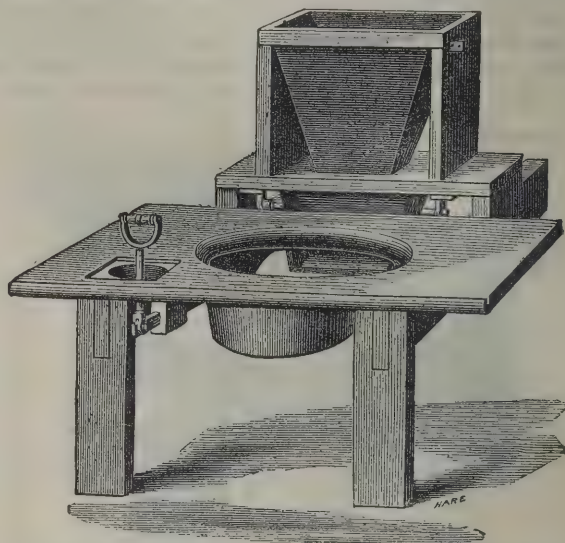
**Messrs. Clark, Bunnett & Co.**

The exhibit of Messrs. CLARK, BUNNETT & CO., Rathbone Place, Oxford Street, though not presenting any particular novelty, is a fully representative one. The ramifications of this firm are of the most extensive character, for besides branch establishments in several cities in the United Kingdom, they are represented in several European capitals, and in New York, Boston, and Melbourne. The self-coiling revolving shutters of steel, iron, and wood made by them have a world-wide sale, and there is probably no name so extensively seen on these safeguards to our shops and warehouses as "CLARK, BUNNETT & CO." They are shown in several varieties, but need no detailed description. Another speciality with the firm is hoists and lifts, and these, too, are made for every conceivable purpose for which such appliances have become necessary, from the simple hand-power dinner-lift for a private house to that adapted for raising heavy weights in warehouses, and the luxuriously furnished passenger-lift for hotels or mansions. We may note that the whole of their lifts are made with safety gearing, rendering them in use free from danger in case of accident to machinery. The firm also enter extensively into other engineering work, the new Cattle Market at Deptford and the Central Fish Market at Farringdon Street bearing ample testimony to their abilities as constructive engineers. Several specimens of iron and bronze castings are in addition shown as *bric-à-brac* to the collection. A somewhat recent addition to their manufactures is exhibited in the form of the patent Kaio Kapuos smoke-consuming grate, of which they have become proprietors. This grate, it will be remembered, was exhibited at the late Smoke Abatement Exhibition at South Kensington. It underwent some crucial tests both with anthracite and bituminous coal, burning the former freely, and the latter with a very small percentage of smoke. There are few grates mentioned in the official report of the Exhibition to which such high praise is accorded, and it was awarded a silver medal, the highest in its class. Its construction is such that it can be used either as a slow-combustion or quick-draught grate, the change being effected by means of two valves of simple character. When the direct up-draught to the chimney is closed the products of combustion are carried downwards in a serpentine direction to a combustion chamber underneath, which soon becomes highly heated, and here they are mainly consumed, the residue passing up behind the fireclay back of the grate also very hot ere they escape to the chimney. In the cheapest form in which it is made the Kaio Kapuos is a comparatively inexpensive article as compared with some others claiming to be constructed on smoke-consuming principles. Another useful apparatus exhibited is CLARK'S patent self-gripping crab, which by means of very simple mechanism enables the weight to be arrested in its progress at any moment. Numerous specimens of metallic Venetian blinds, of which large quantities are yearly turned out by this firm, form the principle remaining portion of the collection.

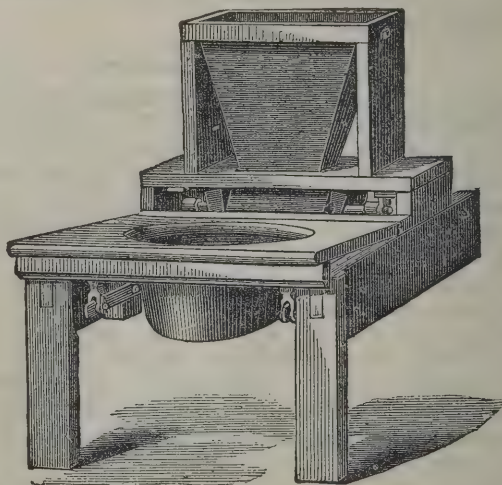
**Moule's Patent Earth Closet Company.**

Earth closets are very completely represented by MOULE'S PATENT EARTH CLOSET COMPANY, Garrick Street, Covent Garden, to whom the public are indebted for perfecting and simplifying this system. In all there are six examples of closets and commodes, and three models illustrating their applicability under varying circumstances, besides specimens of the accessories necessary in their use. One of the models depicts the arrangements for an earth closet on the first floor of a house. Immediately under the seat is a receptacle held in suspension by two weights, chains, and pulleys, which, working in a channel prepared for it, can be lowered to be emptied, and then drawn up again to its proper position. This channel or "lift" should be made against the outer wall of the house, and accessible to the garden, so that the attendants need not enter the house; and if the lift is carried to the upper floors, it can be easily adapted to supply the reservoirs with fresh earth for the closets there fixed. A second model shows a closet for the ground floor, or adapted for a garden. By having two small doors in

the wall at the side of the closet, or a larger one in the wall at the back, the supply of earth to the reservoir, and the emptying of the receptacle, may be effected from the outside, and without the closet being entered, thus securing cleanliness and obviating the necessity of the attendant entering the house. A third model illustrates the mode of emptying and refilling with earth from the inside, intended for places where it is not convenient to carry it on from the outside, or where a male attendant is not kept. It also shows how the earth reservoir may be increased in size to enable it to receive sufficient for a much longer period, and so reducing the attention to a minimum. Amongst the apparatus shown, we select two for illustration. The first, No. 4A, has a "pull-up" handle as to a water-closet of the best



construction, and an earthenware rim instead of galvanised iron. The seat is 3 feet long, is made of well-seasoned deal, and is sent out ready for fixing. Our second illustration, No. 5A, is on the self-acting principle. The seat, it will be observed, is slightly raised, and is actuated by a spring connected with the earth receptacle. When in use the seat is pressed down to a level, but on the occupant rising the seat rises also, and opening the valve connected with the receptacle discharges the earth over the faecal matter. This, too, is fitted



with an earthenware rim, is of the same wood as No. 4A, and the makers consider it to be the most perfect form of dry-earth closet yet produced. The commodes exhibited are of the "pull-up" and "self-acting" order, as the "apparatus," are made of different woods, are very compact, and may be used with perfect immunity in a chamber. The accessories shown are the "Broadmoor tank," a strong iron receiver running on wheels, with handle for drawing; a War Office pail, as supplied to the Government, and a sieve for sifting the earth. It is quite unnecessary for us to enter upon the advantages of earth closets. For country or suburban districts, mills, factories, &c., or wherever a supply of earth, or earth and ashes, can be obtained, their advantages are manifold, and the valuable manure they give us very quickly pay for their cost. Considering the expense of fittings connected with water-closets, including the risk of freezing, &c., the expense is much



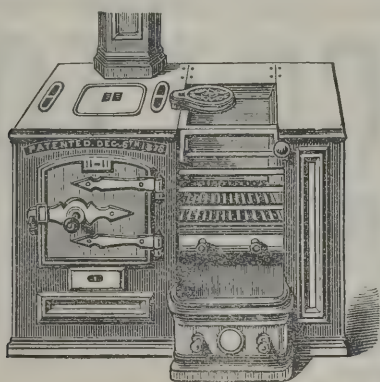
less, and the steady increase in the sale is a proof of their success. MOULE'S EARTH CLOSET COMPANY have certainly been the pioneers in this industry, and the apparatus they send out are of the most reliable kind.

#### Messrs. Chambers, Monnery & Co.

MESSRS. CHAMBERS, MONNERY & CO., 41 Bishopsgate Street Without, E.C., are again well to the fore with a good general assortment of builders' ironmongery, including some elegant suites of fancy wood and polished brass furniture for inside and front doors, patent and other casement and sash-fasteners, &c. Despite the very ordinary appearance a collection of this kind must of necessity present, the intent observer will not pass this stand without his attention having been arrested by at least two quite distinct classes of goods. We refer to wall-ties and kitchen-ranges. The annexed cuts depict two new designs



of the former articles, which are known as MONNERY'S Patent, and will tend to make the name of this firm and wall-ties more and more synonymous terms. As the engravings show, they are made with and without turn-down points; but the special feature consists in the serrated or jagged surfaces and the centre studs or bosses, which a glance will show no amount of pressure or strain will disturb, and they should in future, where their use is necessary, be the only ones specified. In ranges their "Kitchenette," of which we also append a sketch, is a



leading feature. Though but 30 inches, it possesses a capacious oven, and the flues are arranged in the most approved manner, so as to utilise all the heat. It is also self-acting and requires comparatively no setting, and, with its wrought bars, brick back, and great strength, may be called a "Leamington" in miniature.

#### Messrs. Butters Brothers.

An interesting assortment of builders' machinery is shown by Messrs. BUTTERS BROTHERS, of Hope Street, Glasgow. The leading item in the exhibit is a contractors' hand-derrick crane on a new principle. As we purpose presenting our readers at no distant date with a fully illustrated and detailed description of this article, we shall on the present occasion merely observe that its arrangements to dispense with the lapping or coiling of chain in lifting the load and in lowering the motion wheels do not revolve, that is to say, they are put out of gear by a lever, which also, with the assistance of a clutch, controls the lowering; friction is thus obviated and wear and tear of motion wheels prevented. A new concrete mixer, capable of massing 80 to 100 cubic yards per day of ten hours is another conspicuous feature, and there are navy barrows with steel wheels and axles—again reducing friction and labour—and tipping boxes with false bottoms. From a contractor's standpoint, this is one of the most unique exhibits in the Hall.

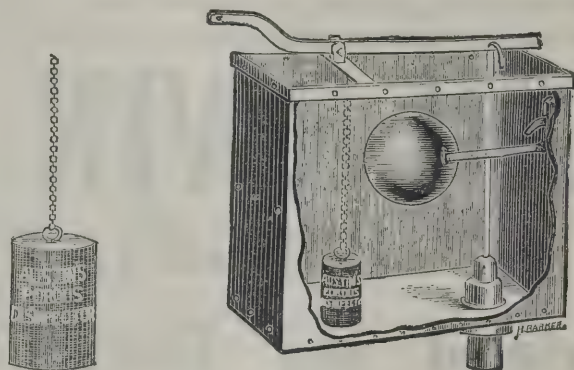
#### Messrs. Esdaille & Co.

Amongst the display of joinery, that of Messrs. ESDAILE & CO., Wenlock Basin, City Road, as usual, calls for remark. Amongst the collection are doors of American and Swedish make, Swedish mouldings, and the cheap trellis-work that at this season of the year in particular is to be found in all directions. English and American Venetian-blind laths are to be seen side by side, as well as

hand and machine-made plasterers' laths, &c. Some attractive ornamental sash-frames are also exhibited. The question of cost as regards foreign joinery has been so often adverted to as to leave little room for further remark, and we can only again call the attention to the English to the "moral" these importations point to. A section of this exhibit is devoted to ships' blocks, of which the firm are extensive makers by steam machinery. They comprise nearly every kind required by the mariner, and are excellent specimens of workmanship.

#### The Austin Disinfecter Company.

THE AUSTIN DISINFECTOR COMPANY, of the Wool Exchange and West India Dock Road, exhibit their system of automatic flushing for closets, urinals, drains, &c., by the assistance of antiseptic or disinfectant. The syphon is constructed to receive a small box upon its top and in connection with it, containing a disinfectant or antiseptic. This may be either in the form of a liquid or soluble crystal, a row of small holes in the lower part of the reservoir bringing the water into contact with it, and in discharging until the water passes the holes in question, a certain quantity is drawn out and mixes with the clear water. The syphon can, of course, be arranged to flush at periodic times, according to circumstances, and a constant flow of a disinfectant into closets or drains is bound to have a purifying effect and to render such places inodorous or innocuous. An even more simple and inexpensive mode of securing the same results is obtained by inserting a small vessel made of a porous clay into the supply cistern, and which we illustrate. This porous



disinfecter, which is supplied at the small sum of 6s. 6d., is filled with crystals of a soluble disinfectant. The water penetrating the clay dissolves the crystals, which, in turn, permeate the water in the supply cistern, and so give us a flush of disinfectant every time it is discharged. It is said that one of these clay vessels, filled with the chemical, will operate unimpaired upon the water for six months, and the advantages thus offered, if universally carried out, must, of necessity, effect improvement in the sanitary features of our houses, &c.

#### Messrs. Rendle Bros.

MESSRS. RENDLE BROS., 3 Westminster Chambers, Victoria Street, Westminster, still maintain the reputation they have attained for their "Electric" paint remover. This remarkable preparation, which we have often described before, does not appear as if it were going to be superseded; indeed, we doubt if it is possible to find any other substance so quick and ready in action. The effect with which it removes old paint or varnish, however hard, is such that the day cannot be far hence when hot irons, charcoal fires, scrapers, &c., with their attendant nuisances, must give place exclusively to this admirable and simple preparation.

#### The Indestructible Paint Company.

THE INDESTRUCTIBLE PAINT COMPANY, Cannon Street, E.C., make their usual interesting display of their indestructible and enamel paints and BROWNING'S patent invisible preservative solution. Of the latter it is impossible to say more than we already have in our columns, and the fact that at the late Fisheries Exhibition it was awarded a special diploma of merit shows that it is still unrivalled. We are told that the authorities of the British Museum, and Science and Art Department, South Kensington, have largely used it for coating fossils and geological specimens with the most satisfactory results.



**Messrs. Meakin & Co.**

Messrs. MEAKIN & Co., Baker Street, W., are present with their patent sash-fastener and opener. This appliance, which has stood the test of several years, and is now very well known, is fitted to a full-size model of a heavy plate-glass window, so as to readily demonstrate its practical qualities. Amongst the advantages it possesses are that it provides a perfectly convenient means of opening and closing the largest plate-glass windows for ventilation, and secures both sashes when closed. The use of long-arms and the ordinary sash-fastener are entirely dispensed with, and offers a more effective resistance to burglars. Their patent "oilaible sash-pulleys" are also worthy of note. They are particularly adapted for heavy sashes, as the axles can be lubricated without any trouble, and their durability and freedom of movement is thereby much increased.

**Messrs. Smith & Stevens.**

Messrs. SMITH & STEVENS, 48 Leicester Square, and Queen's Road, Battersea, are no mean competitors in the hoist and lift industry, and show three or four varieties possessing noteworthy features. Prominent amongst them is their "self-sustaining" lift for hand-power, which we drew attention to last year, but which has since been somewhat improved upon. In its original form friction wheels were arranged to act upon the suspending rope of the lift, that no matter what weight might suddenly be introduced in the cage it would not move without the aid of the endless hand-rope. In the course of time, from wear and tear, &c., these friction wheels were found liable to lose some of their power, and this has now been rectified by

the substitution of iron dogs in the gearing, which create a firmer grip, and ensure at all times the regular action of this automatic break. RUSSELL's patent "Wonderful" self-feeding open fire-grate, GILMORE & CLARKE's patent self-regulating ventilator, and a good general assortment of builders' ironmongery completes this exhibit.

**The Bracknell Pottery Brick and Tile Co.**

The BRACKNELL POTTERY, BRICK AND TILE CO., Bracknell, Berks, and Nine Elms, S.W., again send a very useful collection. The exhibit comprises a variety of designs of superior ornamental and moulded bricks, hand and machine-made red facing bricks, rubbers, &c. But this firm make a leading feature of tiles, and they have put up a structure to show these, and also the working of external and internal angles, sprockets, tips, and valleys, &c., the finish, and clean, and true appearance of which leaves little to be desired. Less cannot be said of the ridges, finials, &c., which are also of excellent design; and the various other samples shown, comprising garden tiles, agricultural pipes, paving squares, and glazed encaustic tiles, are equally meritorious.

**Messrs. J. J. Greenwood.**

Messrs. J. J. GREENWOOD, of Carlyle Works, Lot's Road, Chelsea, S.W., exhibit a good assortment of slate slabs, cisterns, urinals, Williams's and other ridges, and every kind of slate-work; Staffordshire blue bricks, ridge-tiles, garden edging, drain-pipes, and chimney-pots. Mr. GREENWOOD also has a good show of marble chimney-pieces, fenders, dairy shelves, lavatory tops, and every description of marble.

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INTERNATIONAL  
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MANCHESTER, 1882.

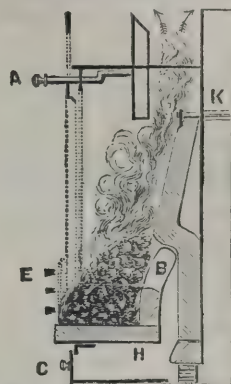


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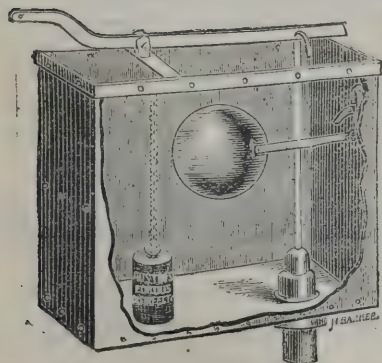
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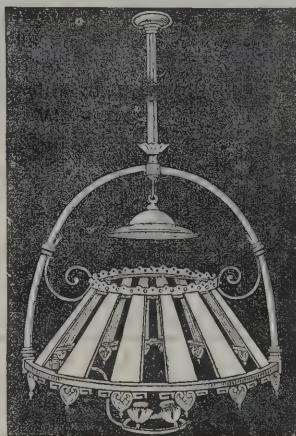
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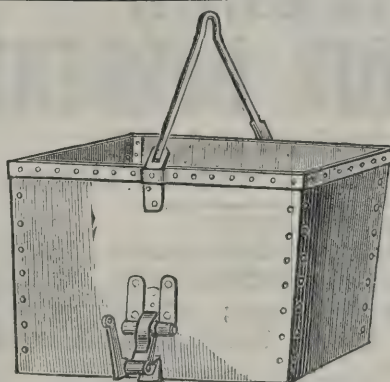
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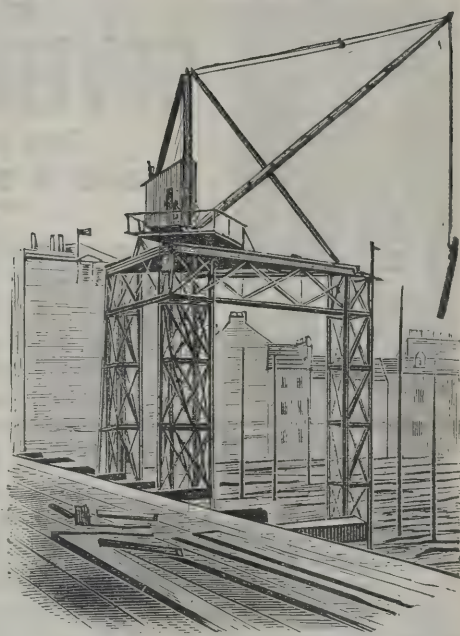
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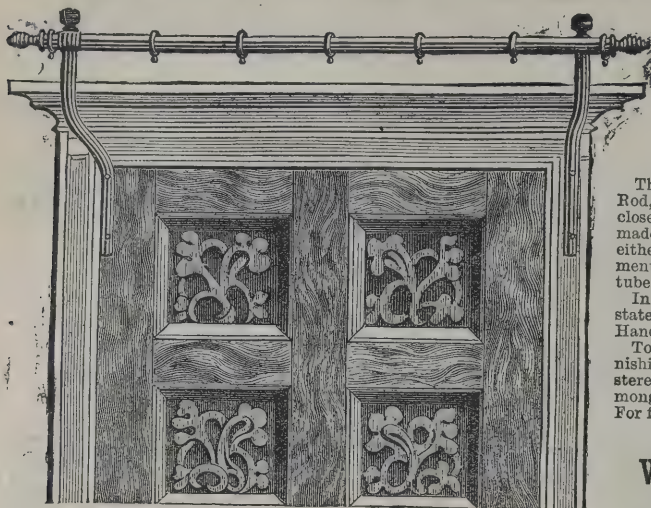
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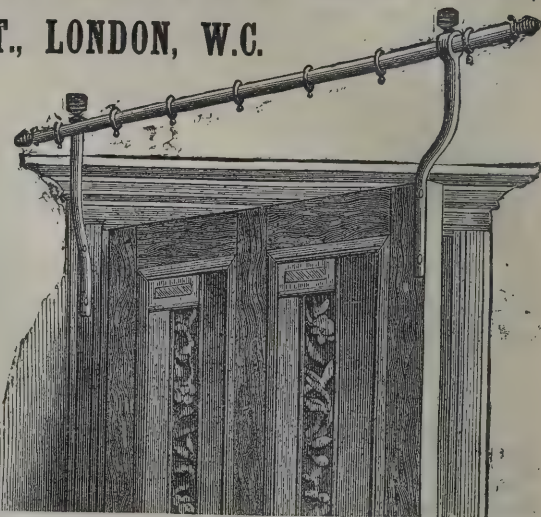
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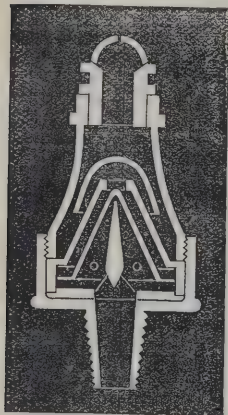
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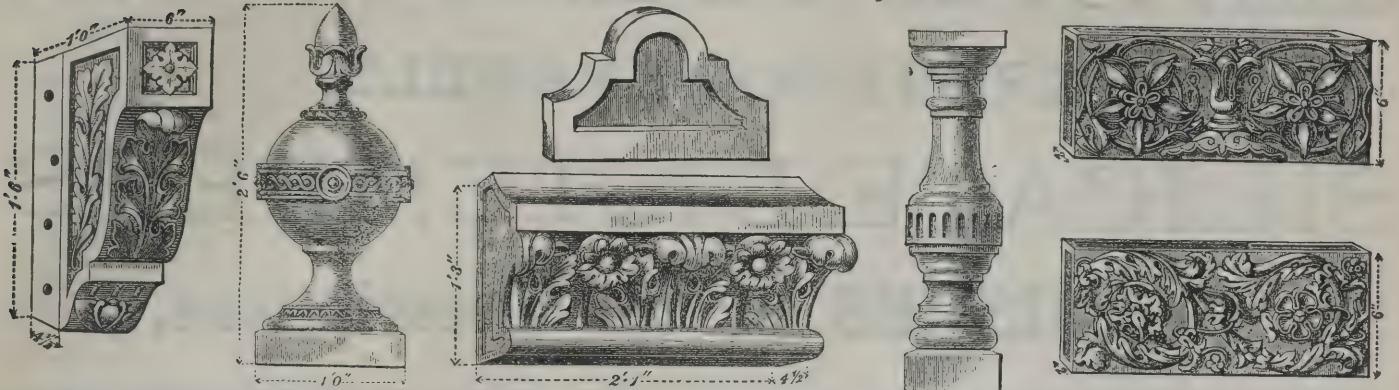
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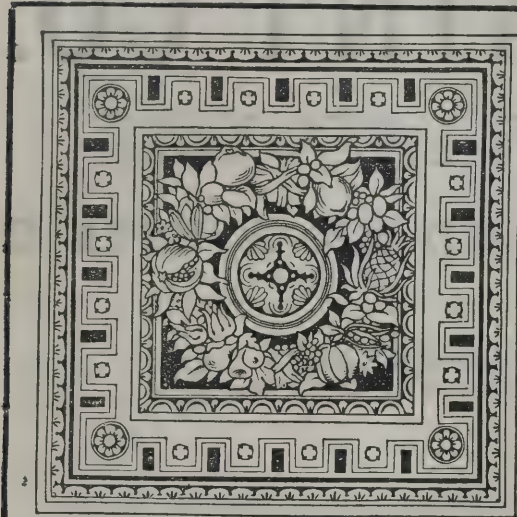
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**COPY OF POST OFFICE TELEGRAM.**

*7th March, 1884.*

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 Enamel and other Paints, Colours, Varnishes, &c.*



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MARCH 29, 1884.

### COMPETITIONS OPEN.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**NEWCASTLE-ON-TYNE.**—March 29.—Designs are invited for Baths and Washhouses, to be built on three sites within the City. The City Engineer, Town Hall, Newcastle-on-Tyne.

**SUNDERLAND.**—May 19.—Designs are invited for Laying out Twenty Acres of Land, the Mill Farm and Broad Meadows, Durham Road, Sunderland, for Villas, Terraces, or Street Rows, with Sewerage, &c. Premiums of Thirty and Twenty Guineas. Messrs. Duncan & Duncan, Solicitors, 3 Market Place, South Shields.

### CONTRACTS OPEN.

**ABBEYLEIX.**—April 2.—For Building large Dwelling-house. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

**BALLYMONEY.**—March 31.—For Building a Church. Messrs. Young & Mackenzie, Architects, Belfast.

**BAMFORD.**—April 5.—For Building Church. Mr. H. C. Charlewood, Architect, 6 John Dalton Street, Manchester.

**BRADFORD.**—March 29.—For Building Shed at Britannia Mills. Messrs. W. & R. Mawson, Architects, Exchange, Bradford.

**BUDLEIGH SALTERTON.**—April 2.—For Building Wesleyan Sunday School Rooms. Mr. W. H. Wells, Architect, 15 High Street, Budleigh Salterton.

**BURY.**—April 7.—For Removal of Heap Bridge over the River Roch, and Erection of Stone Bridge in lieu. Mr. W. Radford, Bridgemaister, 1 Princess Street, Manchester.

**CARLISLE.**—For Building Board Schools, Lowther Street. Mr. George D. Oliver, Architect, Bank Chambers, Carlisle.

**CANNOCK.**—For Building a Residence. Mr. M. Joyce, Architect, Stafford.

**CANNOCK.**—April 8.—For Additions to Five Ways Board School for 160 Children. Mr. Benjamin Baker, Architect, Free Library Buildings, Lichfield Street, Willenhall.

**CARNFORTH.**—For Building St. John's Church, Silverdale, near Carnforth. Mr. W. Ball, Architect, 20 Cooper Street, Manchester.

**CEFN COED.**—April 1.—For Building Residence. Mr. John Williams, Architect, Morgan Town, Merthyr.

**CHATHAM.**—April 8.—For Building Infirmary for Medway Union. Mr. E. W. Stephens, Architect, West Borough, Maidstone.

**CHRLSEA.**—April 9.—For Building Block at Infirmary. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**COBHAM.**—March 31.—For Chap ls, Boundary Fences, Gates, &c. Mr. G. H. Birch, Architect, 68 Lincoln's Inn Fields.

**CONISBORO'.**—March 29.—For Construction of Brick Gasholder Tank. Mr. R. Bridge, Gas Engineer, Doncaster.

**COVENTRY.**—April 10.—For Building Fever Hospital and Out Offices. Mr. E. J. Purnell, C.E., City Surveyor, St. Mary's Hall, Coventry.

**CUCKFIELD.**—April 7.—For Additions to Mytten House. Mr. F. W. Holloway, Hayward's Heath.

**DERBY.**—March 31.—For Building Boundary Wall and Gates, Grange Lane, and Formation of Carriageway and Footway. Mr. Thomas Coulthurst, C.E., Borough Surveyor, Full Street, Derby.

**DERBY.**—April 2.—For Building Workshops and Converting existing Workshops into Stabling at Ford Street Depot. Mr. Thomas Coulthurst, C.E., Borough Surveyor, Full Street, Derby.

**EAST GREENWICH.**—April 2.—For Building Mission Hall, Westcombe Park. Messrs. Romaine, Walker & Tanner, Architects, 19 Buckingham Street, Adelphi, W.C.

**EATON BISHOP.**—April 3.—For Restoration of Church. Mr. T. Nicholson, F.R.I.B.A., Hereford.

**FAWLEY.**—April 8.—For Restoration of Parish Church of King's Cople. Mr. T. Nicholson, Architect, Hereford.

**GLOSSOP.**—April 10.—For Building Church and Presbytery. Rev. Canon Tasker, St. Mary's, Glossop.

**HEADINGLEY.**—April 1.—For Building Four Houses, and Alterations to Property. Mr. T. Winn, Architect, Victoria Buildings, 18 Park Lane, Leeds.

**HIPPERHOLME.**—April 7.—For Building School. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**HOLBECK.**—April 8.—For the Masonry in the Abutments, and for the Cast and Wrought Iron in the Girders and Parapets of a Bridge to be Built over the Low Beck. Mr. Hewson, Borough Engineer, Town Hall, Leeds.

**HOLYWELL GREEN.**—March 31.—For Building Fireproof Mill, &c., Warehouse, Engine-houses, and Chimney. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**HORNSEY.**—April 7.—For Construction of Brick and Pipe Sewers. Mr. T. de Courcy Meade, Surveyor to the Local Board, Southwood Lane, Highgate, N.

**KEIGHLEY.**—March 31.—For Building Stables. Mr. D. Weatherhead, Architect, 1 Carlton Street, Keighley.

**KING'S NORTON.**—April 11.—For Building Police Station. Mr. Henry Rowe, County Surveyor, 17 Foregate Street, Worcester.

**LEEDS.**—April 1.—For Alterations to West Riding Hotel. Mr. T. Winn, Architect, 18 Park Lane, Leeds.

**LICHFIELD.**—For Enlargement of Lichfield Theological College. Mr. F. J. Robinson, Architect, 45 Friar Gate, Derby.

**MANCHESTER.**—April 8.—For Extension of Head Office Buildings, Hunt's Bank. Mr. William Dawes, Architect, 2 Cooper Street, Manchester.

**MORPETH.**—April 18.—For Extension of County Lunatic Asylum. Mr. J. Cresswell, County Architect, Moot Hall, Newcastle-on-Tyne.

**NEWCASTLE-ON-TYNE.**—March 29.—For Erection of New Buildings for Eye Infirmary. Messrs. Newcombe & Knowles, Architects, 89 Pilgrim Street, Newcastle-on-Tyne.

**NEWQUAY.**—March 31.—For Executing Work in Putting Back Tretherras Corner. Mr. Silvanus Trevail, Architect, Truro.

**NORTH SHIELDS.**—April 17.—For Construction of Brick Gasholder Tank. Mr. W. B. Davidson, 97 Bedford Street, North Shields.

**RIPPONDEN.**—April 2.—For Building Eight Houses near Soyland Paper Mills. Mr. W. H. D. Horsfall, Architect, Albany Chambers, Commercial Street, Halifax.

**SEDBERGH.**—April 7.—For Building Swimming-Bath, Gymnasium, and Sanatorium at Grammar School. Mr. W. Wright, Surveyor, Lancaster.

**STOCKPORT.**—April 7.—For Building Fireproof Cotton Mill. Mr. J. Stott, Architect, 22 Clegg Street, Oldham.

**TOTTENHAM.**—April 21.—For Construction of Brick and Pipe Sewers. Mr. de Pape, Engineer to the Local Board, High Road, Tottenham.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

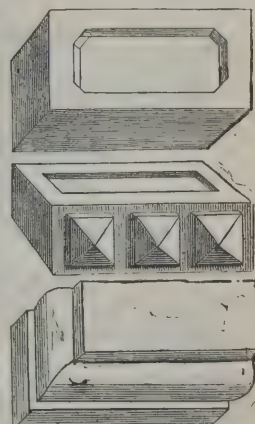
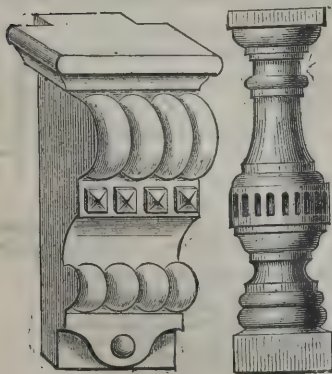
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Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

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WEST HAM.—April 8.—For Erection of School Buildings. Mr. J. T. Newman, Architect, 2 Fen Court, E.C.

WILSDEN.—March 29.—For Building Two Shops and Three Houses. Messrs. Leeming & Leeming, Architects, Northgate Chambers, Halifax.

WREXHAM.—For Building Chapel and School-room at Moss. Mr. H. Webber, Architect, Westminster Buildings, Wrexham.

## TENDERS.

### BATLEY CARR.

For Building Bobbin Mill, Bradford Road, Batley Carr, for Mr. Walter Williamson. Mr. REUBEN CASTLE, Architect, Westgate, Cleckheaton. Quantities by the Architect.

Chadwick & Sons, Batley Carr, mason and carpenter.  
Barracough, Heckmondwike, plumber.  
Morton, Cleckheaton, plasterer.  
Pickles Bros., Leeds, slaters.  
Townsend, Dewsbury, painter.  
Newsome Sons & Speddings, Dewsbury, engine and shafting.

### BURNLEY.

For Building Infant School, Stoneyholme, Burnley. Mr. THOMAS BELL, Architect, Burnley.

#### Accepted Tenders.

Laycock, mason.  
Leigh, joiner.  
Stanworth, slater.  
Owen & Co., plumber and glazier.  
Aspinall, plasterer and painter.  
Total, £1,000.

For Additions to St. Stephen's Schools, Burnley Wood, Burnley. Mr. THOS. BELL, Architect. Quantities by the Architect.

#### Accepted Tenders.

Parker Bros., mason.  
Dean & Son, joiner.  
Barnes, slater.  
Owen & Co., plumber.  
Ratcliffe, painter.  
The estimated cost is about £300.

### CROMER.

For Building Terrace of Six Houses in the Norwich Road, Cromer, Norfolk, for the Cromer Hall Estate Building Co., Limited. Mr. ED. JNO. MAY, A.R.I.B.A., Architect. Quantities by Mr. R. C. Gleed.

Newman, Cromer . . . . . £4,125 0 0  
Bird, London . . . . . 3,969 0 0  
Wegg, Norwich . . . . . 3,910 0 0  
DOWNING & SON, Norwich (accepted) . . . . . 3,721 0 0

### EDINBURGH.

For Erection of Building for the International Forestry Exhibition, Edinburgh.  
BEATTIE & SONS, Edinburgh (accepted).

### EASINGTON.

For Additional Buildings to Workhouse at Easington.

Brown, Easington . . . . . £2,298 10 0  
Jopling, Durham . . . . . 2,205 10 0  
Shaftoe, Sunderland . . . . . 2,189 0 0  
J. & D. Rankin, Sunderland . . . . . 2,047 0 0  
Bradley, Stuart & H. Robson, Easington . . . . . 2,003 0 0  
Bradley, Stuart & J. Robson, Easington . . . . . 1,999 10 0  
Sanderson, Durham . . . . . 1,960 0 0  
Robson, West Hartlepool . . . . . 1,895 0 0  
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ELSTON, Houghton-le-Spring (accepted) . . . . . 1,740 15 0

### GLOUCESTER.

For the Raltes Memorial School, Gloucester. Messrs. SEARLE & HAYES, Architects. Quantities by the Architects.

Fream . . . . . £2,396 0 0  
Gudwin . . . . . 2,293 0 0  
Drew . . . . . 2,255 10 0  
Sims . . . . . 2,240 0 0  
Jones . . . . . 2,190 0 0  
King . . . . . 2,166 0 0  
Webby . . . . . 2,150 0 0  
Jones & Co. . . . . 2,148 0 0  
Meredith . . . . . 2,097 0 0

### HALIFAX.

For Extension of Dye Works and Warehouse, Raglan Street, Halifax, exclusive of Carpenter and Joiners' Work, Mr. T. L. PATCHETT, Architect.

Jenkinson, mason and bricklayer (principally old material's)  
Blackburn, slater.  
Bolton, plumber and glazier.  
Love, carpenter and joiner.\*  
Highest tenders, £566.  
Lowest tenders, £303.  
Accepted tenders, £450.

\* Day-work, and not included in tenders.

### HASTINGS.

For Rebuilding Business Premises in Castle Street, Hastings. Mr. A. W. CROSS, A.R.I.B.A., Architect, Hastings, and 56 Chancery Lane, W.C.  
AVIS (accepted) . . . . . £250 0 0

For New Bar Fittings, &c., at the Old Golden Cross Tavern, Hastings. Mr. A. W. CROSS, A.R.I.B.A., Architect, Hastings, and 56 Chancery Lane, W.C.  
AVIS (accepted exclusive of Pewterer's work) £168 14 4

### LINCOLN.

For Building Mission Chapel, Lincoln. Messrs. BELLAMY & HARDY, Architects, Lincoln.

Martin & Sims, Lincoln . . . . . £1,250 0 0  
Harrison & Sands, Lincoln . . . . . 1,154 0 0  
Allman, Lincoln . . . . . 1,138 13 9  
Middleton, Saxilby . . . . . 1,114 10 0  
Baines, Newark . . . . . 1,069 0 0  
Horton Bros., Lincoln . . . . . 1,022 10 0  
CROSBY & SONS, Lincoln (accepted) . . . . . 1,019 0 0

### LIVERPOOL.

For the Erection of the Northern Two-storey Cages of the Liverpool Zoological Gardens. (Contracts 4 and 5). Messrs W. SUGDEN & SON, Architects, Leek.

The Everton Quarry Company, Liverpool, and Hutchinson & Co., Clayton, Manchester . . . . . £2,850 0 0

### LLANTRISSANT.

For Baptist Chapel and Vestry at Pontyclown, Llantrissant.

Harley, Felin'ach . . . . . £675 0 0  
Davis, Pontyclown . . . . . 675 0 0  
James & Son, Bridgend . . . . . 553 0 0  
Morgan, Pontyclown . . . . . 553 0 0

### LONDON.

For Extension of School Board Offices, Victoria Embankment. Mr. E. R. ROBSON, Architect.

Oldrey . . . . . £17,195 0 0  
Hannen & Hannen . . . . . 16,900 0 0  
Bangs & Co. . . . . 16,740 0 0  
Wall Bros. . . . . 16,717 0 0  
Boyce . . . . . 16,534 0 0  
Peto Bros. . . . . 16,422 0 0  
Perry & Co. . . . . 16,053 0 0  
Brass . . . . . 14,981 0 0  
Higgs & Hill . . . . . 14,840 0 0

For Erection of Board School, Ponton Road, Nine Elms. Mr. E. R. ROBSON, Architect.

Mitchell . . . . . £15,191 0 0  
Shurmur . . . . . 12,370 0 0  
Scrivenner & Co. . . . . 12,167 0 0  
Rider Hunt . . . . . 12,123 0 0  
Johnson . . . . . 12,057 0 0  
Brass . . . . . 12,031 0 0  
Wall Bros. . . . . 11,994 0 0  
Patman & Fotheringham . . . . . 11,979 0 0  
Turtle & Appleton . . . . . 11,879 0 0  
Bissett & Son . . . . . 11,859 0 0  
Lathey Bros. . . . . 11,816 0 0  
Hobson . . . . . 11,844 0 0  
Grover . . . . . 11,735 0 0  
Wall . . . . . 11,643 0 0  
Nightingale . . . . . 11,631 0 0  
Marland . . . . . 11,614 0 0  
Kirk & Randall . . . . . 11,610 0 0  
Hart . . . . . 11,572 0 0  
Tongue . . . . . 11,514 0 0  
Stimpson & Co. . . . . 11,500 0 0  
Bangs & Co. . . . . 11,490 0 0  
Howell & Son . . . . . 11,467 0 0  
Downs . . . . . 11,444 0 0  
Jerrard . . . . . 11,443 0 0  
Oldrey . . . . . 11,377 0 0  
Perry & Co. . . . . 11,328 0 0  
Atherton & Latta . . . . . 11,300 0 0

For Board School, Hithergreen Park Road, Greenwich. Mr. E. R. ROBSON, Architect.

Staines & Son . . . . . £9,777 0 0  
Shurmur . . . . . 9,750 0 0  
Perry & Co. . . . . 9,010 0 0  
Holloway . . . . . 8,990 0 0  
Hart . . . . . 8,985 0 0  
Stimpson & Co. . . . . 8,979 0 0  
Downs . . . . . 8,978 0 0  
Brass . . . . . 8,936 0 0  
Patman & Fotheringham . . . . . 8,888 0 0  
Scrivenner & Co. . . . . 8,884 0 0  
Lathey Bros. . . . . 8,869 0 0  
Grover . . . . . 8,846 0 0  
Wall . . . . . 8,829 0 0  
Wall Bros. . . . . 8,815 0 0  
Kirk & Randall . . . . . 8,775 0 0  
Howell & Son . . . . . 8,736 0 0  
Jerrard . . . . . 8,633 0 0  
Bangs & Co. . . . . 8,590 0 0  
Atherton & Latta . . . . . 8,500 0 0

For New Sunday School, Class rooms, and Alterations, Wesleyan Chapel, Hampstead. Mr. CHAS. BELL, Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.

Wall Bros. . . . . £3,124 0 0  
Watson . . . . . 3,078 0 0  
McCormick & Sons . . . . . 3,055 0 0  
Taylor & Grist . . . . . 3,051 0 0  
Allen & Sons . . . . . 2,959 0 0  
Burford & Sons . . . . . 2,949 0 0  
Anley, Doulton Lane . . . . . 2,790 0 0

The lowest accepted for a portion of the work, omitting the Caretaker's House, &c.

For Pulling Down and Rebuilding Nos. 53, 54, 55, and 56 Rathbone Place, and making sundry Alterations and Additions to No. 57 Rathbone Place, and No. 60 Oxford Street, for Messrs. Parkins & Gotto. Mr. SILVESTER C. CAPES, Architect, 16 Doughty Street. Quantities by Messrs. Karslake & Mortimer, 5 Great Queen Street, Westminster.

Patman & Fotheringham . . . . . £7,573 0 0  
Bird . . . . . 7,492 0 0  
Fish, Prestige & Co. . . . . 7,386 0 0  
Bywater . . . . . 7,148 0 0  
Manley . . . . . 7,100 0 0  
Scrivenner & Co. . . . . 6,968 0 0  
Nightingale . . . . . 6,960 0 0  
Brass . . . . . 6,947 0 0  
Downs . . . . . 6,933 0 0  
Lawrance & Sons . . . . . 6,895 0 0

### LONDON—continued.

For Enlargement of Board School, Stockwell Road, Brixton. Mr. E. R. ROBSON, Architect.

F. & F. J. Wood . . . . . £5,582 0 0  
Shurmur . . . . . 5,493 0 0  
Kirk & Randall . . . . . 5,294 0 0  
Marland . . . . . 5,237 0 0  
Downs . . . . . 5,178 0 0  
Goodman . . . . . 5,105 0 0  
Johnson . . . . . 5,069 0 0  
Howell & Son . . . . . 5,034 0 0  
Scrivenner & Co. . . . . 4,996 0 0  
Perry & Co. . . . . 4,982 0 0  
Grover . . . . . 4,963 0 0  
Lathey Bros. . . . . 4,932 0 0  
Brass . . . . . 4,919 0 0  
Wall Bros. . . . . 4,883 0 0  
Jerrard . . . . . 4,866 0 0  
Nightingale . . . . . 4,832 0 0  
Bangs & Co. . . . . 4,824 0 0  
Rider Hunt . . . . . 4,806 0 0  
Atherton & Latta . . . . . 4,700 0 0  
Stimpson & Co. . . . . 4,690 0 0

For Rebuilding Nos. 1 and 2 New Street, Bishopsgate. Mr. CHAS. BELL, Architect. Quantities by Mr. H. Lovegrove, 26 Budge Row, E.C.

Lodge . . . . . £4,200 0 0  
Gibbons . . . . . 3,200 0 0  
Rayner . . . . . 3,075 0 0  
Allen & Son . . . . . 2,990 0 0  
Anley . . . . . 2,940 0 0  
Shepherd . . . . . 2,925 0 0  
Woodward . . . . . 2,920 0 0  
Staines & Sons . . . . . 2,884 0 0  
Scrivenner & Co. . . . . 2,814 0 0  
Holliday & Greenwood . . . . . 2,687 0 0  
Smith & Sons . . . . . 2,645 0 0  
GREEN, Clapton (accepted) . . . . . 2,637 0 0

For Covered Playgrounds to Board Schools.

*Kenmont Gardens.*  
Mortor & Co. . . . . £275 0 0  
Ewart & Son . . . . . 209 16 0  
Riley Bros. . . . . 186 0 0  
Wall . . . . . 130 0 0

*Larkhall Lane.*  
Ewart & Son . . . . . £199 10 0  
Lowes . . . . . 185 0 0  
Holden . . . . . 175 0 0

For New Warehouses, Tabernacle Walk, for Messrs. Lawes & Co. Mr. JOHN T. BRESSEY, Architect.

Reed . . . . . £4,700 0 0  
Parmenter . . . . . 4,432 0 0  
Boyce . . . . . 4,200 0 0  
Rider & Son . . . . . 4,198 0 0  
Larter & Son . . . . . 4,104 0 0  
Harris & Wardrop . . . . . 3,844 0 0

For Alterations and Additions to No. 1 Campden House Road, Kensington, for Mr. J. Foster Allcock, Mr. JOHN T. BRESSEY, Architect.

Parmenter . . . . . £1,250 0 0  
Boyce . . . . . 1,093 0 0  
Larter & Son . . . . . 1,048 0 0  
Rider & Son . . . . . 1,028 0 0  
Harris & Wardrop . . . . . 992 0 0

For Altering and Repewing the Welsh Chapel, Stepney. Mr. F. BOREHAM, Architect.

	Generally.	Extra works.
Spencer & Co. . . . .	£474 0 0	£75 5 0
Richards . . . . .	423 10 0	49 10 0
L. H. & R. ROBERTS (accepted) . . . . .	397 0 0	67 10 0

For Building Welsh Chapel, Sussex Road, Holloway, for Putting New Galleries, &c. Mr. F. BOREHAM, Architect.

Goodman . . . . . £582 0 0  
L. H. & R. Roberts . . . . . 559 0 0  
Holloway . . . . . 545 0 0  
Grover . . . . . 544 0 0  
WILLIAMS & SON (accepted) . . . . . 537 0 0

### LOWER WORTLEY.

For Erection of U.M.F.C. Chapel and Schools, &c., Lower Wortley, Leeds. Mr. THOMAS HOWDILL, Architect.

Riley, Wortley, mason.  
Taylor, Yeadon, joiner.  
Pycok & Son, Leeds, slater.  
Lazenby, Leeds, plumber.  
Smithies & Sons, Castleford, plasterer.  
Nelson & Sons, Leeds, ironfounder.  
Walker, Idle, painter.

### NELSON.

For Building Congregational Chapel, Nelson, Lancashire. Mr. GEORGE FELL, Architect, Manchester. Quantities by the Architect.

*Accepted Tenders.*  
Hawley, excavating, brickwork, and masonry . . . . . £1,622 0 0  
Pollard & Son, carpenter and joiner . . . . . 830 0 0  
Stamworth, slater . . . . . 135 0 0  
Butler, plasterer . . . . . 107 10 0  
Hargreaves, plumber, glazier, and painter . . . . . 259 7 6

Total . . . . . 2,958 17 6

### NEW DEER.

For Free Church at New Deer, Aberdeenshire. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.

Davidson, New Pitaligo, mason.  
Leslie & Co., Aberdeen, carpenter.  
Pirie, Aberdeen, slater.  
J. & J. Hutchison, Metblick, plasterer.  
Rennie, Fraserburgh, plumber.  
Donald, Aberdeen, painter and glazier.  
Total amount of Tenders, £2,025.  
The Heating Apparatus is not included in above.



NEWMARKET.

For Building a House for Mr. W. H. Manser, at Newmarket. Mr. Wm. C. MANNING, Architect, Newmarket. Quantities by Mr. W. G. E. Bagg.

Wilkes Bros.	£2,598	0	0
Kinninmont	2,510	0	0
Brass	2,510	0	0
Jacklin	2,500	0	0
Holland & Hannen	2,489	0	0
Boyce	2,480	0	0
Nightingale	2,430	0	0
Lawrance & Sons	2,375	0	0
Dove Bros.	2,278	0	0
Bell & Sons	2,189	0	0
Thackray			

For Building New Training Establishment at Newmarket, for Mr. C. Wood. Mr. W. C. MANNING, Architect, Newmarket. Quantities by Mr. W. G. E. Bagg.

Second Competition.

Warboys, Basingbourne	£7,120	0	0
Wilkes, London	6,998	0	0
Boyce, London	6,630	0	0
Prime, Cambridge	6,487	0	0
Putrey, Newmarket	6,484	0	0
Jacklin, Royston	6,474	0	0
LAWRANCE & SONS, London (accepted)	6,398	0	0

PAR.

For the Erection of Dwelling-house and Post-office at Par Station, Cornwall, for Mr. George Lias, Postmaster. Building stone supplied by the proprietor. Mr. SILVANUS TREVAIL, Architect, Truro.

Rowe & Pearce, St. Blazey	£377	0	0
Godfrey, Liskeard	374	0	0
Pearce, St. Blazey	347	18	6
Dingley, St. Winnow	305	0	0
Mitchell, Tywardreath	274	15	0
Bassett & Wellington, Lostwithiel	262	0	0
ROWE & SON, St. Blazey (accepted)	248	0	0

PICKERING.

For Erection of Primitive Methodist Chapel and Schools, Pickering, Yorks. Mr. THOMAS HOWDILL, Architect, Leeds.

Smith, Pickering, mason.			
Fletcher, Pickering, joiner.			
Temple, Leeds, slater.			
Thompson, Leeds, plumber.			
Lonsdale, Malton, plasterer.			
Fletcher, Pickering, ironfounder.			
Dabank, Leeds, painter.			

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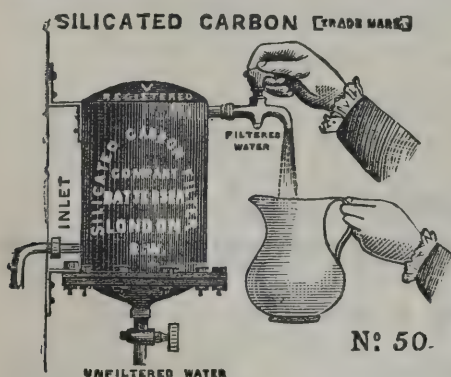
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LOCHEE.

For the Erection of Manse for the United Presbyterian Church, Lochee. Messrs. JAMES MACLAREN & SON, Architects, Dundee.

Duncan, Dundee, mason.			
Mackie & How, Dundee, joiner.			
Alexander & Law, Dundee, slater.			
Masterton, Lochee, plumber.			
McRitchie, Dundee, plasterer.			
Bryden & Sons, Dundee, bells and blinds.			
Total cost, £1,660.			

SOMERSET.

For Additions to Horsington Church, Somerset. Messrs. WILSON, WILLCOX & CO., Architects, Bath.

Chancellor, Bath	£2,896	0	0
Bladwell & Parsons, Bath	2,780	0	0
Brown, Frome	2,622	7	6
Cox, Yeovil	2,600	0	0
Hayward & Co., Bath	2,599	10	0
Wall & Hook, Brimscombe	2,574	0	0
Frisk, Elminter	2,422	0	0
Parsons, Stalbridge	2,414	0	0
Francis & Son, Castle Cary	2,401	0	0
LONG, Bath (accepted)	2,223	0	0

For Additions to High Littleton Church, Somersetshire. Messrs. WILSON, WILLCOX & CO., Architects, Bath.

Brook & Bruce, Bristol	£2,450	0	0
Chancellor, Bath	2,400	0	0
Wall & Hook, Brimscombe	2,280	0	0
Long, Bath	2,260	0	0
Hayward & Co., Bath	2,247	0	0
Brown, Frome	2,198	10	0
BLADWELL & PARSONS, Bath (accepted)	2,148	0	0

STALYBRIDGE.

For Extensions and Alterations to Central Stores, Stalybridge. Messrs. JAS. LAWTON & SON, Architects, St. Chad's, Uppermill, Saddleworth.

Grayson	£2,238	0	0
Gartside & Barnes	1,964	0	0
France	1,722	0	0
SHAW, CUZNER & CO. (accepted)	1,720	0	0

TWICKENHAM.

For two New Semi-detached Houses fronting The Green, Twickenham, for Mr. E. H. Brown. Mr. THOS. R. RICHARDS, Architect, 17 King Street, Cheapside, E.C.

Quantities by the Architect.			
Higgs & Hills	£2,328	0	0
Shade	2,130	0	0
Sims	2,100	0	0
Boyce	2,075	0	0
Harris & Wardrop	1,994	0	0
Messom	1,993	0	0
T. & W. HICKINBOTHAM*	1,884	0	0

\* Accepted subject to modifications arranged.

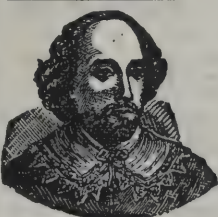
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WALTHAMSTOW.

For Erection of Two Shops at Walthamstow. Mr. JOHN HAMILTON, Architect.

Scott	£2,973	0	0
Shurmer	1,998	0	0
Harper	1,992	0	0
Reed	1,986	0	0
Fuller	1,891	0	0
Good Bros.	1,760	0	0

WANSTEAD.

For Wings and Additions to Cann Hall Lane Board School, Wanstead. The increased accommodation being for 369 children as follows:—Boys, 170; girls, 100; infants, 99. Mr. JOHN T. BRESSEY, Architect

Bottoms Bros., Battersea	£2,836	0	0
Bartlett, Fulham	2,820	0	0
Jones & Co., Gloucester	2,749	0	0
Russell, Forest Gate	2,690	0	0
Catley, Stratford	2,689	0	0
Gregar, Stratford	2,677	0	0
Hack, Poplar	2,597	0	0
D. D. & A. Brown, Camberwell	2,595	0	0
Hoskings, Forest Gate	2,579	0	0
Reed, Stratford	2,575	0	0
Harris & Wardrop, Limehouse	2,384	0	0
Hunt, Bow Common	2,315	0	0
Priestley & Garney, Hammersmith	2,294	0	0
Robson, Woodford*	2,279	0	0
Brickell, Manor Park	2,150	0	0
Smith, London	2,015	0	0

\* Accepted subject to approval of Education Department.

WOOBURN.

For New Class-room to National Schools, Woburn, Bucks. Mr. ARTHUR VERNON, Architect, 26 Great George Street, and High Wycombe.

Woodbridge	£334	0	0
Gibson	295	0	0
Silver	294	0	0
Looseley	277	17	0
HUNT (accepted)	257	0	0

WOOLWICH.

For Erection of Lodge, Workshops, Brick Boundary Walls and Iron Fencing to Enclose the Woolwich Cemetery and Additional Lands near Plumstead Common, for the Woolwich Burial Board. Mr. H. H. CHURCH, Architect, Woolwich. Quantities supplied.

Kirk & Randall, Woolwich	£6,540	0	0
Tillbrook, Crouch End, N.	5,652	0	0
Avard, Maidstone	5,648	0	0
Coombs, Plumstead	5,498	0	0
Wright, Woolwich	5,490	0	0
Loneragan Bros., Plumstead	5,350	0	0

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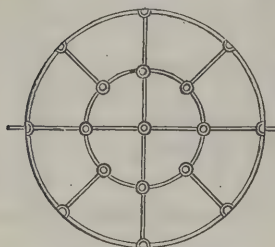
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**PATENT WROUGHT-IRON SASHES WITH WROUGHT BOSSES**

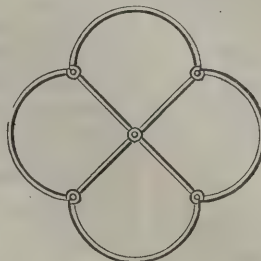
SPECIALLY ADAPTED FOR WAREHOUSES, SCHOOLS, AND PUBLIC BUILDINGS.



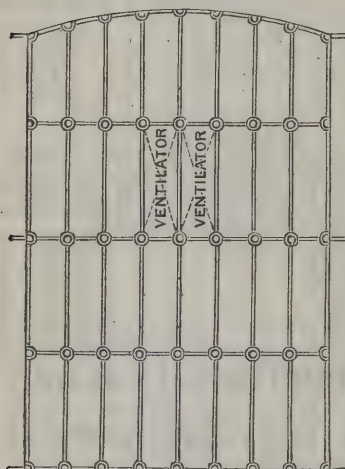
CABLE LIGHT

The Patentee begs to call particular attention to the great strength of this construction. The Bars and Bosses, being of malleable wrought iron, form an exceedingly firm joint at the intersection of bars. They are durable, and of light appearance, the Bosses being small and not unsightly. They can be made at very short notice, and at the price of an ordinary cast iron sash.

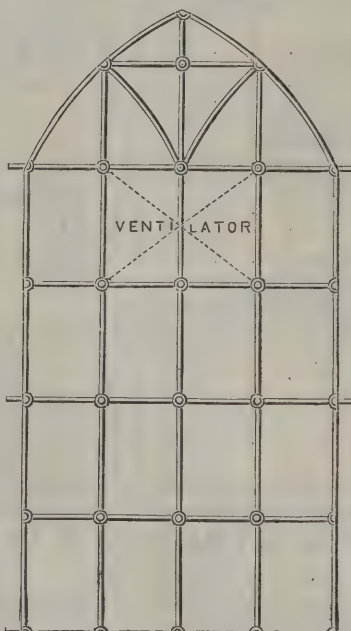
PRICES UPON APPLICATION.



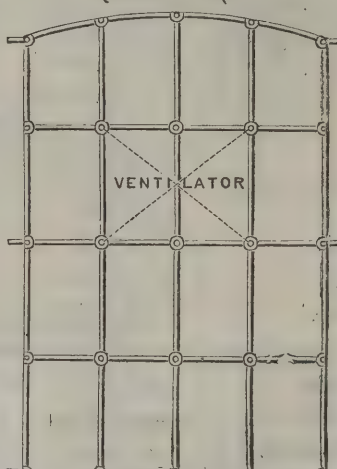
CABLE LIGHT.



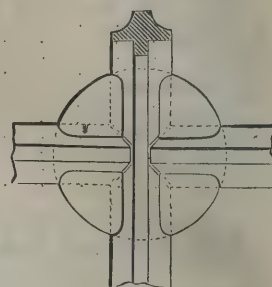
CLOSE BAR SASH (obviating use of Window Guards)



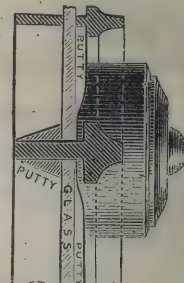
ORDINARY WAREHOUSE AND SCHOOL SASHES.



VENTILATOR

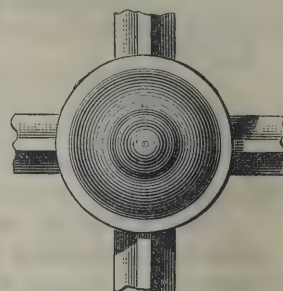


Back view of Boss, full size.

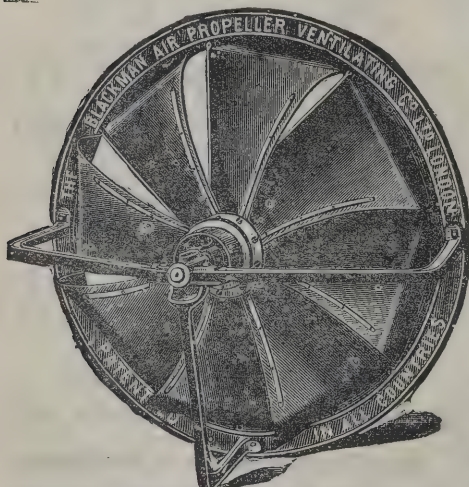


Section through Boss, full size.

These can be glazed flat, like ordinary wooden sashes, without the corners of the panes being chipped off.



Front view of Boss, full size. Obscuring no appreciable light.

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# The Architect.

## STONE, BRICK, AND PLASTER AT THE BUILDING TRADES EXHIBITION.



THE institution of an annual exhibition of the productions of inventors and manufacturers in connection with the great "industry" of building is one which in these enterprising days seems obviously to involve the promise of no inconsiderable benefit. So many, indeed, and so various, are the contrivances that crop up every year in England, in this more than most other branches of trade, that the more ordinary resources of public advertisement frequently fail to attract attention even to the best of them, and nothing short of

a "concours" of this kind can therefore be effectual. The great difficulty appears at first sight to be how to procure the attendance of the public, if merely those sections of the public more closely concerned. This difficulty can only be met in one way. The promoters must be content with the best attendance they can get of those who represent, if not the actual "consumers" or persons for whom houses are built, the agents of those consumers, or those who build the houses for them. Amongst these, professional architects necessarily take a leading place; and it is especially a matter of interest for them to consider year by year what progress is being manifested. We propose, therefore, on this occasion to take up a few of the questions involved in building progress, and inquire in what direction, and with what effect, the development of improvement seems to be made apparent. These points necessarily must be few, and our observations must be brief; we will also ask to be excused for not quoting names.

Artificial stone, concrete, brickwork, and terra-cotta may fairly claim the first notice. It may look like a paradox, but it is not so, when it is suggested that Nature does not undertake to provide man with materials for building. In other words, in primitive construction we make what use we can of what substances come most readily to hand; in construction more mature, we confine ourselves to the most suitable, and refine upon our processes of adaptation; but in advanced scientific design, as an altogether artificial enterprise, we are bound to consider—iron, for instance, is a notable case in point, and steel still more so—that our ingenuity in contrivance ought to be exercised quite as much, if not a great deal more, upon the artificial perfection of the material as upon the artificial application of it. Hence it is that in our age, as especially the age of invention, mere stone dug from the quarry, mere brick moulded from the clay, and even mere timber cut from the forest, have ceased to impose upon us the trammels of their accidental structure, and we are boldly searching around for such equivalents as shall be, by reason of invention rather than discovery, superior to these crude because fortuitous productions.

In the exhibition before us artificial stone occupies a prominent place, especially if we include concrete in the name. We ought also the more readily to be allowed to do this because it is in the direction of lime concretes that the development of artificial stone is now actually taking place. The more purely chemical contrivance whereby sand and silicate were so ingeniously brought into the form of a silicious sandstone does not appear to be at present engaging specific attention, except that silicate of soda is introduced as an accessory, to aid, if it really does so, the more direct induration of a calcareous hydrate. But several processes are being earnestly pursued which we may describe in common language as the production of a strong mortar of lime or cement and a granular substance, for conversion by one or another form of pressure into a block of stone; and no one can help perceiving that very remarkable success attends several of these efforts. In one case it is the boast of the manufacturer that he accomplishes by such means so perfect an "imitation" of the texture and tint of several well-known natural stones as to deceive the experienced eye; and no doubt he is entitled to add that both in mechanical strength and in chemical durability the artificial material is superior to

the crude natural substance imitated. But here we venture to think the element of imitation is a fault rather than a merit. The proper texture for an artificial stone is simply the texture which arises out of its proper manufacture, and the proper tint is in like manner the tint which comes of its own accord, modified, if at all, by fair means, for some proper purpose, such as pleasing colour for its own sake. Let us understand, however, that the development of artificial stone is now proceeding, not upon any new line, but upon the old basis of mixing together a calcareous cement, a silicious or metallic sand, and water. This may appear to be scientifically a sort of retrograde movement, but nevertheless it may perhaps be practically the only direction in which to attain the object dictated by circumstances. It must be left, however, to inventors to argue out the principle for themselves.

Terra-cotta does not appear to be engaging so much attention as might be expected; that is to say, theorists and artists are claiming for it more consideration than manufacturers are bestowing upon it. This is probably to be regretted. The South Kensington type of terra-cotta, or the true old Italian—that which accepts the block without sophistication as it comes from the kiln—is surely well worthy of all the development it can receive; that in which, on the other hand, blocks are more or less faced or touched up before use is perhaps scarcely worthy of praise on principle. But, at any rate, we may suggest that terra-cotta "ornaments" are scarcely so worthy of critical approval; the proper service of the material, at its best, is for an entire facing, or at the least for a very liberal arrangement of dressings on a facing of brick of high quality. The mere ornamentation of terra-cotta is the easy part of the problem; the more difficult considerations are the colour, the durability, the regularity of simple shape, and of course the price.

This brings us naturally to speak of brick, and it must be acknowledged that the exhibits of brickwork are more satisfactory in a certain sense. Indeed they are what may be called too satisfactory. The best specimen is simply a piece of rich architectural design, with elaborate carving executed on the substance of the brick with the usual tools of the stone carver, the white jointing coming wherever it may. This surely cannot be approved by the architectural critic. It is brick, no doubt; and it is work done in or upon brick; but it is not brickwork. It is stone carving done in a material which is not meant for stone carving, or for any carving. If terra-cotta, artistically considered, ought to have the surface of kiln-burning left untouched, much more ought the ornamental character of brickwork to be produced by means of bricks wholly unsophisticated. Compare, for instance, the Elizabethan chimney shafts with the modern Queen Anne pilasters and pediments—to say nothing of swags of fruit—and the rationale of the matter is clear. Moreover, what is the substantial value of a brick after its surface has been chiselled and carved away and even undercut? Another sample of ornamental brickwork in the exhibition is as crude and coarse as the one just referred to is, in its way, elegant and refined. Perhaps it is more honest brickwork, but so much the worse for the pretensions of brickwork when they get on a wrong line. Ornamental brickwork may perhaps be at once described as a style of work which in the nature of the thing can never be of the rich Renaissance style at any rate.

Glazed bricks seem to be progressing a little; but it seems doubtful whether they can ever be successful in practice in the way which theory points out so confidently. To put a glaze upon good bricks is easy enough; and the fact that the glaze keeps itself clean—with a little attention—is easily understood; but there is something in the glazed surface as a whole which always looks out of place; and yet one can scarcely tell why. Is it because the element of glazing demands æsthetically a special treatment in respect of forms—something, perhaps, of the same order as highly subdivided mediæval work, with a special avoidance of all breadth of reflecting surface?

In plaster work, papier-maché, and the like, something but not much is being done. Structurally the fireproof plaster slabs cannot but be interesting. The use of slag wool is also a contrivance which may probably have a future before it in the way of fireproof stuffing or underlaid covering; but most of us would perhaps prefer to trust to it in some more artificial form. Fibrous slab—made of canvas and paste, we believe—as a more rough material, and papier-maché as a finer one, may often do good service. But why should either of them be used to cover and conceal iron ribs and convert them in



appearance into impossible stone beams? In the new glazed roof of the Royal Exchange, for instance, where so excellent an opportunity is afforded for legitimate ironwork, it is only paper soffits that we shall see after all! Surely this is a pity.

Sgraffito work, or the "scratching" away of an outer coat of plaster in one colour to expose an under coat of another colour, is a form of art which, one would think, in some of the rough-and-ready picturesque architecture of our day, ought to be cultivated. It is represented in the exhibition, but not to much purpose; may we recommend it to the attention of experts?

## INDUSTRIAL ART EXHIBITION AND COMPETITIONS, BRUSSELS.

BY A CORRESPONDENT.

NOT long ago we described an interesting architectural exhibition held in the handsome Palais des Beaux-Arts, Brussels. This has now been superseded by a manifestation, also of an artistic and archæological nature, though of a different branch of industrial art. The present exhibition has been organised by the Technical Instruction Section of the Brussels Union Syndicale, as the complement of a series of competitions in furtherance of the cause of technical education. This, the first of a series of periodical competitions and special exhibitions, was originally limited to designs of lace and fans, to which were subsequently added the allied industries of embroidery and artificial flowers. Under the patronage of the Count and Countess of FLANDERS, the presidency of M. CH. BULS (Burgomaster of Brussels), and the vice-presidency of M. DANSAERT, President of the Union Syndicale of Brussels, a loan collection of works of ancient textile art has been got together that afford almost as much interest to the archæologist as to the expert.

From the introduction, by Canon REUSENS, to the section of embroidery, we find that the invention of this art was attributed by the Romans, who largely employed it, to the Phrygians; the term *orfroi*, which was used in the Middle Ages for embroidery executed partly or entirely with gold threads, being a corruption of *aurum Phrygiæ*. We learn also that, from the commencement of the thirteenth century, the art of embroidery, justly called *acupictura*, or "needle painting," attained great perfection, became still further developed during the fourteenth, and began to decline from the commencement of the fifteenth century. At this epoch, three countries especially distinguished themselves, viz., Belgium, Burgundy, and the Rhine Province. The two principal centres for the production of embroidered fabrics were Cologne and Arras, which latter name has been adopted both in our own language and that of Italy as the term for the fabric made there.

Among the embroidered works previous to the fifteenth century (of which a piece typical of each period from the tenth century has been selected), besides a rectangular band of Oriental origin, of apparently earlier date than the eleventh century, there is a chain-stitch embroidery in different coloured silk on fine linen, with two scenes, one probably representing the Flight into Egypt, that was worked in the tenth or eleventh century. There is an interesting collection of *aumônnières*, or *escarcelles*, of both the thirteenth and fourteenth centuries, and also a cope, illustrating the martyrdom of the Apostles, dating from the beginning of the fourteenth century, and in an excellent state of preservation. An altar frontal from the Church of St. Martin, Liège, is of red velvet, ornamented with (1) four vertical *orfroi* bands of the sixteenth century, (2) two circular medallions of the same epoch, and (3) a band of embroidered *orfroi* of the fourteenth century, with an addition, made in the sixteenth century, of two rectangular portions.

Among the church vestments a chasuble from the church of St. Nicholas, Namur, with the inscription, "Mgr. JOHANNES DE RAMONT me fecit fieri. Orate pro eo. Anno Domini M.CCCCC," produces great effect with apparently insignificant means. Another chasuble, from the church of St. Charles Borromeo, Antwerp, is exceedingly interesting, because the medallions are believed to have been embroidered by the hands of HELEN FOURMENT, RUBENS' second wife, after the works of the great master. One of the gems of the collection, and in which the ground does not kill the work, is the cope

called that of St. LIEVIN (Abbot of St. Bayon, Ghent), of gold brocade, with embroidery after the cartoons of GÉRARD HORENBOUT. A cope of the seventeenth century in black velvet, embroidered with circular medallions, from Notre Dame, Tongres, is interesting because it has silver clasps of the fifteenth century. Another in red velvet from the same church, of about the year 1700, has silver clasps of the beginning of the sixteenth century. In a dalmatic, in red velvet, of the sixteenth century, lent by M. GUST. VERMEERSCH, the faces of the Virgin and Child and various saints, embroidered in medallions, are so remarkably well executed that they look like miniature paintings.

Another gem (although it was purchased not many years ago for 30*l.*) is an altar frontal, in *orfroi*, of about the year 1620, representing the Last Supper, and also the four other meals at which our SAVIOUR is recorded to have been present. A frontal (lent by M. SOMZÉE) embroidered in gold and coloured silk on white silk ground, is remarkable for the fact that musical notes are introduced into the composition.

Among the embroidered pictures is an oval medallion in coloured silk representing CHARLES I. of England; a landscape, embroidered in coloured silk, dates from the seventeenth century. Very interesting are the escutcheons and flags of the old guilds, and the collection includes one of the only nine tabards, or herald's coats-of-arms, that are known to be in existence, of which there are four at Vienna and the remaining four at Madrid. In one of the many richly-embroidered coats of the LOUIS XVI. period, some feathers embroidered in coloured silk appear as if they were real and merely laid on. The Brussels municipal authorities have lent the costumes of the famous statuette called *Manneke-Pis*, which were made by order of LOUIS XV. after the Battle of Fontenoy (1745). The French having carried off "the oldest citizen of Brussels," the people rose in consequence, when the King of France caused the statuette to be restored, and invested it with the cross of St. LOUIS. Some coverlets (*couvre-lits*) of the fifteenth and sixteenth centuries are exhibited, and also a large *marquoir*, or sampler, of the seventeenth century. M. GUST. VERMEERSCH has contributed a throne in red damask of GEORGE III. of England, with the initials "G. R." At that period it was customary for ambassadors to have thrones ready to receive their sovereigns in the event of a visit.

Canon REUSENS has also contributed some notes on lace, from which it appears that this work may be divided into four principal classes: (1) *laci*, consisting in a network of square or lozenge meshes, on which the design is embroidered; (2) work produced by withdrawing threads; (3) point or application; and (4) pillow lace. If the derivation of our generic term for the productions of this art is evident, that of the French *dentelle* is no less so, the borders being frequently *dentelè*, or indented. In most specimens of lace there are two distinct parts, the field and the ornaments, which are technically denominated "flowers," whether they be really so or not; but in some kinds of lace, notably those of Venice and Spain, there is no ground, the "flowers" being connected by irregular attachments. The word *guipure* would appear to have a very wide and indefinite signification. Originally, *guipure* was made of a small strip of parchment, covered with silk or gold or silver thread, producing ornaments in relief; then the silk rolled round the parchment or a thick thread was called *guipure*; and latterly this term has been used for lace of linen threads, with *flowers* of a vague and undecided pattern.

North Italy and Belgium dispute the honour of originating the lace industry, and both appear to have good ground for their claims. At any rate, Belgium produced a great deal of pillow lace from the beginning of the fifteenth century, without flowers or ornaments, which served for a long time as the field or foundation of Brussels point; while, a little later, at the beginning of the sixteenth century, Belgium also excelled in *laci*, as proved by the lace cap worn by CHARLES QUINT under his crown, and still preserved in the Cluny Museum at Paris. On the other side, Venice originated, or at any rate introduced, the point lace or application, in which flowers in relief were produced by the needle. The difference between Venice and Genoa lace is that the flowers of the latter are in rather lower relief. At Venice also were published the first books containing patterns of lace. It is sad to think that Mechlin lace, the "queen of the laces," as it is called by English poets of the seventeenth century, which was made entirely with bobbins (*fuseaux*) should now be almost extinct.



Among the five hundred and seventy-three specimens of lace exhibited, that which first claims notice is a superb alb in Venice lace, decorated with allegorical figures in the manner of BÉRIN. In some Brabant *guipure* the design is very marked. A Flemish tablecloth of the sixteenth century, 1·68 by 1·3 mètre, lent by Mdlle. LÉONIE T'SERSTEVENS, is formed of squares worked by bobbins and united in chess-board fashion, the subjects being alternately historical and simply decorative. Besides several specimens of gold and silver lace, there are a dozen painted portraits, taken from various collections, to show the manner in which lace was worn at the different periods. One room is entirely devoted to the extensive and well-known collection of Madame MONTEFIORE LEVI, which includes an ancient *nanduli*, or veil, brought from Paraguay, and an ancient Persian sampler. There are also some unique examples of the lace that was formerly made at Binche, in Belgium, and distinguished by its *mate* ground.

In a lively introduction to the section of fans, M. GUST. VERMEERSCH reminds us that the fan, in semicircular form, appears on the frescoes and bas-reliefs of Assyrian and Egyptian monuments; and that, in the "Orestes" of EURIPIDES, a Phrygian slave recounts that he has, with soft freshness, slightly raised the hair of the sleeping HELEN by means of a fan of feathers. Fans made of feathers are frequently represented on Grecian and Etruscan vases; while the *tabellæ* mentioned by OVID and PROPERTIUS consisted of thin slips of wood strung together as at the present day. The use of the fan, chiefly as a means for driving away flies, entered generally into the domestic life of the eleventh and twelfth centuries, when ostrich, peacock, and raven's feathers were mounted on golden or ivory handles, frequently enriched with precious stones. An inventory of the personal effects of CHARLES V. of France (1380), includes a round folding *esmouchoir* in ivory with an ebony handle, and ornamented with the arms of France and Navarre. At the time of HENRI III. of France, whose *esventail* is minutely described by PIERRE DE L'ÉSTOILE, three forms of fan were in use: those of feathers, small flags of Moorish origin imported from Italy, and folded fans like those of the present day. In the seventeenth century they were made of leather, taffetas, and paper; while pearl mountings, delicately wrought with open work, first made their appearance. In the eighteenth century the fan assumed its present aspect; and great artists, including BOUCHER and WATTEAU, did not disdain to adorn them with their paintings. In the eighteenth century another kind of fan was much in vogue; it was entirely composed of very thin sheets of ivory, ornamented in the lower portion with Chinese subjects on gold ground, and in the upper with mythological or historical compositions after the manner of LEBRUN. These fans are distinguished by being coated with the very fine varnish which was invented by the carriage-painter MARTIN, at the beginning of the reign of LOUIS XV., and the secret of which is now lost.

The collection contains two remarkable specimens of this last-named style. One, lent by Madame SOMZÉE, with ivory mounting, represents the deliverance of ANDROMEDA, with a pastoral subject after WATTEAU on the reverse. The other, lent by Madame LAMBERT DE ROTHSCHILD, dating from the middle of the eighteenth century, is ornamented with two subjects, also after WATTEAU—angling, and a village dance. The Viscountess MOERMAN D'HARLEBEKE contributes a fan of the LOUIS XV. period, mounted with pearl and gold, and the parchment exquisitely painted—it might be by BOUCHER—with a subject illustrating the hymeneal altar. To mention one more of the two hundred and seventy ancient fans exhibited, No. 1,039, lent by the Countess DE LALAING, is a historical fan, representing a kissing of hands at the court of PHILIP V. of Spain, and includes thirty-six figures. On the reverse is a sea piece. The mount is of tortoiseshell, inlaid with figures in chased gold and silver.

Turning now to the modern section, which is numerically, as well as from an artistic point of view, far inferior to the ancient, we find several architects, including M. BORDIAU and M. BAES, on the executive committee. There are fifteen exhibitors of lace and twelve of embroidery, while the Brussels and the Antwerp technical schools for girls, the respective directresses of which are Mdlle. MARCELIS and Mdlle. VAN DE WAELE, contribute designs for lace and embroidery executed by the pupils. Mdlle. MARGUERITE DIELMAN, of Brussels, sends designs for a lace parasol, flounce, handkerchief and lappet in "point application." M. L. D. V.

PIOT contributes twelve sheets (out of 125) of drawings of "fantastic flowers," suitable for embroidery and trimmings; and M. E. F. SORÉ, designs of cyphers, arms, &c., for embroidery or other decoration. There are seventeen exhibitors of modern fans, including the two technical schools for girls at Brussels, and that at Mons, of which latter Mdlle. DELBOUILLE is directress. The fourteen exhibitors of artificial flowers include the Antwerp technical school for girls, the pupils of which contribute collections of the various parts, arranged on cards, of several artificial flowers in their successive stages of manufacture, thus illustrating the whole process. To conclude the modern section, there are seven exhibitors of trimmings and four of buttons, the best of which latter are copied from ancient models.

We now come to the special competitions, of which there are two series, one for lace and the other for fans. And here it will be well to notice the ingenious method adopted by the managing committee to prevent the identity of the competitors from being disclosed by the symbol or motto chosen. At the time fixed for the reception of the competing works, each competitor had to obtain from the committee a special envelope, stamped and numbered, to contain his name and address, and also a numbered ticket, about 3 inches by 1½ inches, gummed at the edges, and perforated after the manner of an Oxford frame, for covering over the symbol or motto on the designs, &c., so that the jury had only numbers identified with the works they were called upon to judge. Only one jury was appointed for the three competitions of lace designs, but one each for the three fan competitions. Each jury consisted of only three members, one named by the committee, and the other two by the competitors, by means of voting papers. Several architects were chosen to serve on the juries; and MM. E. HENDRICKX and JANLET, architects, were charged with the arrangement of the works entered for competition.

The first prize (each 300 frs. = 12*l.*) for the three lace designs were carried off, one by M. A. DE SPIEGHELER, and the other two by M. H. VAN CUTSEM, all of Brussels. In the fourth competition, a painted fan, with design for mounting, the first prize (1,000 frs. = 40*l.*) was awarded to M. A. L. DE MOL, and the second (500 frs. = 20*l.*) to M. S. A. LANNEAU. In the fifth competition, a lace fan executed, the first prize (300 frs. = 12*l.*) was awarded "with the greatest distinction" to M. L. SACRÉ; and another (extra) for the mounting, to M. ROYER DE FRAENE. In the sixth competition, "a fan in any style executed," the first prize, of the same value, was awarded to a fan bearing the No. 45, and the motto "A vaincre sans péril, on triomphe sans gloire." It is painted by M. ROYER DE FRAENE, and mounted in tortoiseshell, enriched with precious stones, by MM. BAUTMANS and HOOSEMANS. The competitions and the exhibition generally have caused considerable interest, and have attracted a large number of visitors. The secretary of the work is M. PAUL DAVREUX, formerly engineer and lecturer at the Musée de l'Industrie, and now assistant inspector of technical instruction.

#### SELECTED PICTURES.

IN the galleries of Messrs. WALLIS in Pall Mall and Messrs. MACLEAN in the Haymarket are on view one or two pictures of exceptional interest from foreign ateliers—pictures which, having raised a strife of adulatory or adverse criticism on the Continent, now meet the test of a London audience. In the French gallery of Mr. WALLIS, which should, by the way, be renamed, inasmuch as it is now far more the home of German than of Parisian art, we find in the upper room a picture by Herr LEIBL, of Munich, entitled *In Church*, which last summer created an absolute *furor* of criticism and excitement among the not easily roused people of the Bavarian capital. The subject shows three women of the peasant class seated or kneeling all a-row at their devotions in an open pew at church. They pass in age from youth through worn maturity, wrinkled before due time, to old age; they are all ill-favoured, stolid, ungainly, but clean, dressed in Sunday-best attire, which is ugly, but neat. The artist has been at no pains to soften or select his types for beauty or attractive expression, neither has he chosen to bring their attire into charm of fine or even picturesque colour. The girls' blue and black plaid gown and frightful high hat with twisted gold cord, and stiff



kerchief gaily flowered, serve only to emphasise the angles of her form, and suitably to accompany the huge hands which surely the painter has unnecessarily distorted in pose. The oldest woman, poring over her breviary, and the stern-faced companion beyond, whose profile stands out against the white wall, wear the twisted kerchief over the head, which is the coil of the poor Bavarian peasant woman, and their rough gowns are dark and decent. On this triad of unbeautiful women, with all accessories, Herr LEIBL has bestowed a perfection of solid, elaborate, and close technique, which recalls the manner of the VAN EYCKS. With dry distinctness he has realised the detail, with well-considered scheme he presents the large features of his subject; all is kept in excellent order and relation. There is no doubt about the strength of the artist's effort, or of his reticence. The force and vivid actuality of the picture thus rendered, joined to the familiarity of the types, must presumably account for the great repute which it won when, after four years' labour, shown to the public. To us the picture is a melancholy one. Although there does not cling about it the sordid or brutal associations which the school of homely realism in France forces upon one, yet it certainly does lack the dignity of expression and suggestion which belongs to the higher capacities of the subject. It lacks the appeal of noble colour or of gracious line, and our admiration for the masterful and laborious technical qualities is wrung from us as half-hearted tribute to a painter who foregoes the high privileges which his gift of skill, interpretative and mechanical, places within his grasp, and gives us cold prose instead of fervent poetry, death instead of life.

In the gallery of Messrs. MACLEAN hangs one of those marvellous pages from the annals of the poor, which only M. BASTEIN LEPAGE can thus adequately present from the point of view which he and his *confrères* assume. What that point is we have before now indicated. M. LEPAGE is not cold, impassive, and photographic, like the Bavarian painter on whose work we have been dwelling; he is in earnest about a meaning as well as an object. Philosophically he preaches the doctrine, or so his disciples affirm, that the typical peasant is dirty, sordid, repulsive in habit, without joy or hope, sunk to the lowest ends of animal life, suffering silently, sullenly resigned or doggedly restive; and thus he must be represented, perpetuated on canvas by enduring pictorial record, as a protest against the systems that have made him thus, and the failure of human effort to redeem him, or of Divine pity to rescue him. So here we have a *Rustic Courtship*: on either side of paling that divides neighbours' gardens, a young fellow—mechanic, perhaps, from his ragged apron—and a girl of the people lean to do their wooing—not face to face as in courtship polite, but back to back. There is a touch of the tender prettiness almost inseparable from youth in her averted head and throat above the cotton frock, and she holds a rose in her hand; the low-browed, loutish lover, perhaps at a loss for words, picks his nails—of which process, as of cleaning generally, he stands in much need—while his face expresses a most unjoyful mental state. With detail and mastery are painted the tangle of flowers, the outbuildings, the plots of garden-ground that slope up to the village roofs above on the brow of the hill, and the spire of the church that stands on the farther side. There is plenty of suggestion here of the round of life within the hamlet, and the landscape is put in with even a curious power over the multitudinous accidents of a hillside of vegetable plots and stunted trees. Nevertheless, so joyless is this wooing, so ungainly and begrimed, hard-featured and repulsive the actor most in view, that it were indeed a punishment to be condemned to live with this picture, and daily to peruse such pictorial one-sided diatribe on the sordid lives of the lowly, to whom not even May-time and young love can bring beauty or hope. Here, again, though in different manner from Herr LEIBL, the French painter is false to his vocation, for the office of the artist is not to depict a half-truth, for the purpose of doing which he must as far as possible eliminate the beautiful, exaggerate and dote upon the low and ugly; this is not fidelity to nature, but cynical human contempt, using the painter's brush to close our eyes, not to open them.

Leaving, with only a word of admiration for the delightful work—*The Head of a Girl*—by Signor TITO CONTI, the well-chosen collection in the Haymarket, we return to the French Gallery to note a picture that has given us supreme pleasure by its genuine artistic qualities. This is *A Portrait* by Herr F. A. KAULBACH of a lady, full length, on nearly life scale.

The girlish figure is easily draped in a black silk walking-dress, with gold Marguerite girdle. She holds a blue-and-grey shawl and her parasol against her side with one hand; the other is laid caressingly on the neck of a big hound, whose grey coat brings out the noble lines of his form against her black dress. A swirl of dark green curtain, some rose sprays dimly seen in shadow, break the background low tints. The tone of the whole is dark and quiet, forcing into fresher brilliance the pure flesh tints and *vis* glance of the girl. Nothing more natural than her *pose*, yet nothing more graceful and full of elastic life, held still for the moment. There is an *on ne sait quoi* of distinction in the bearing and type, the carriage of the head, the finely-formed hands; in the picture as a whole unmistakable style, absolute harmony, and a brushwork that is almost playful in deft surety. We have seen nothing more artistic from Herr F. KAULBACH, though some work more imaginative. The portrait picture of the two little *Sisters* in the upper room is, though charming, not so satisfactory.

Mr. WALLIS has gathered many interesting examples of new and old with this season's show. Among the latter must be noted the *Camp Followers*, by EUGÈNE FROMENTIN, a splendid study as regards the figures of the Arab women, though marred by a dull, and yet lurid, colouring. Two little pictures show the extraordinary cleverness in depicting within miniature limits the motley tumult of a carnival crowd in Rome, evinced by Señor F. PRADILLA, whose command of scale was patent in his fine pictures of *Donna Juana la Loca* in the Paris Exhibition of 1878, and the *Surrender of Granada* by *Boabdil* in the Munich International last year. A couple of rustic pictures, on the lines of M. LEPAGE, with rather more sentiment, and considerably less power, bear the well-known signatures of G. LAUGÉE and D. F. LAUGÉE. The conscientious desire of the last-named artist not to adorn the rustic figure with adventitious grace seems to lead him to exaggerate the size and shape of extremities beyond the bounds of veracious ugliness, and even to square out the form by angles that suggest dislocation of members.

The dramatic scene by ADOLF ECHTLER, setting forth the ruin of a Breton peasant household by the father grown madly desperate over the gaming-table, suffers from a certain showiness, but is certain of popularity for its strong narrative appeal. Show is the fault of the very clever picture by P. JOANOWITZ, the young pupil, early in his third decade of age, of Professor MÜLLER, of Vienna. A group of Servian men teach a little lad his sword-play, while women look on admiringly. The incident is telling, and with brilliant manner and the freshness of local type and of rich costume the picture is forced up to high pitch, and is, anyhow, remarkable for hardihood and technical assurance. Among the examples of cabinet scale perfection Herr SEILER holds his own for completeness. A small farcical study of a monk musician wiping his brow during *Five Bars' Rest* is by Signor ANDREOTTI, of whose lively cleverness Mr. MACLEAN has secured many specimens. The German landscape artist, Herr HEFFNER, at neither gallery has anything to show that he intends to pass the limits of a delightful but circumscribed study of watery lands under skies of serene calm or mustering clouds. This painter probably suffers, like many a greater man, from success with a public that is clamorous to have its favourite themes repeated rather than wise to urge an artist into "fresh fields and pastures new."

## THE IMPROVEMENT OF CENTRAL LONDON.

ON Monday last, a private conference of persons interested in London improvements was held at the Mansion House, by invitation of the Lord Mayor, in order to hear and consider a statement by Mr. WESTGARTH of his proposals for the reconstruction of Central London. These proposals have been before the public for some time, and those experienced in the conduct of public improvements in the metropolis seem to agree that they represent an undertaking too formidable to be within the range of practical realisation, as a whole. We hope however, that because Mr. WESTGARTH'S plans aim at more than is at present attainable, at any rate in one generation, they will not be summarily dismissed from the minds of public-spirited men. They contain ideas at once noble and practical, and they form a comprehensive programme such as might well be attacked in sections, though as a whole it may stagger even sanguine reformers.



We do not remember that any individual in our own day has come forward with such large and comprehensive views of this subject, or has shown such conspicuous public spirit as is evinced by Mr. WESTGARTH'S offer of no less a sum than 1,000*l.* in prizes for essays, &c., and by his personal advocacy of the improvements which he desires to see adopted. This alone claims public recognition, and well deserves to be met half-way by those who can render effectual aid in carrying a lofty ideal into practice. Mr. WESTGARTH'S proposed machinery of a Trust might be excellent if a definite improvement of a single locality could be taken in hand to begin with. There are one or two large properties belonging to the City and to great public bodies, which it is well known are likely to be available for improvement shortly, and are virtually in the market now. If such a Trust as has been suggested could be formed, and could secure, for example, that portion of the Bridge House Estates belonging to the Corporation which lies in Southwark, and which will very shortly fall in, together with adjoining properties; and, armed with Parliamentary powers, and the best professional advice, could proceed to remodel on a well-matured scheme the whole of the streets and buildings on that property, a magnificent result might be attained, and one easily within practical reach. There are some acres on the Middlesex side where an operation of the same sort would be possible, and we beg to suggest these to Mr. WESTGARTH and his friends as undertakings which might well receive their best attention, and which would at once command the support of all who are interested in the improvement of the Metropolis—a subject the urgency and importance of which is patent to every one whose business or profession brings him in any way into contact with buildings in London. We heartily wish Mr. WESTGARTH success.

#### PARIS NOTES.

THE International Exhibition of Painting, opened to the public on Wednesday last, the 2nd inst., in M. Georges Petit's Gallery in the Rue de Sèze, can scarcely be said to be worthy of its somewhat high-sounding title. Readers of *The Architect* will probably remember that the avowed object of these exhibitions, the first of which was held last year, is to place under the eyes of the public the distinctive styles in art of the principal nations—one artist, representing as nearly as possible the highest degree of native excellence, being chosen for each foreign country. On this occasion, however, although highly interesting and well worthy the attention of the public, the exhibition can only by a considerable stretch of amiability be recognised as international. It is, in fact, to all intents and purposes an exhibition of French art, for those among the contributors that bear foreign names are, we believe, with scarcely an exception, Parisians by adoption, and thoroughly in the swim of French life. They cannot, therefore, be regarded as representing the characteristic movements of art in the countries of their origin. Thus M. Van Beers, who among foreign painters takes the most prominent place in the gallery, has depicted scenes of Paris and French life in a spirit and manner that is distinctly Parisian, although there is an originality about the treatment of his subjects which gives him a place apart among other workers in the same field. Again, we may remark that no English or American artist has a picture in the collection, and an exhibition cannot be fairly termed international from which the Anglo-Saxon influence on modern art is thus absent.

In general interest the present exhibition is, therefore, far below the level of that organised by M. Petit last year, although it presents a good opportunity of studying the work of some prominent French artists. Even in this respect it is by no means comprehensive, as the following list of exhibitors will show:—MM. Bastien-Lepage, Béraud, Cazin, Duez, Carolus Duran, Roll, Egusquiza, Hellquist, Lieberman, Pasini, A. Stevens, Tofano, Van Beers, and Wauters.

The works of the first-named will almost certainly attract the largest share of attention. They are seven in number, including two portraits. One is that of Madame Drouet, the lady who did the honours of Victor Hugo's home until her decease a few months ago. It could not have been painted long before death; but the face, with its frame of white hair, is still beautiful, and the artist's execution will compare with the best examples of portraiture.

M. Cazin sends two fine works. M. Duez has four canvases, but nothing that is very striking. M. Carolus Duran contributes several portraits, and a painting, *The Caliph's Slave*, which is extraordinarily rich in colour. M. Roll exhibits four pictures, the most noteworthy being a forest scene and the full-length study of a lady in *déshabille*, with her maid fastening the corset. Among other exhibits may be mentioned M. Van Beer's *Flirtation*; *Correspondance au Café*, by M. Béraud; *Harmonie*, by M. Egusquiza; *A View of the Grand Canal* and *The Canonica Canal*, by M. Pasini; *The Open Sea*, by M. A. Stevens; and the portrait of a boy, by M. Wauters.

M. Emile Guimet, of Lyons, has made a gift to the City of Paris of his wonderful collection of more than 12,000 gods, goddesses, fetishes, and divinities of every description illustrating the history and rites of Oriental religions. Several Indian and Chinese priests are said to have presented the collector with many of these figures, in the belief that he was anxious to propagate the Buddhist religion in France as a substitute for Catholicism. According to the Paris papers, Mr. Monier Williams, of Oxford, offered M. Guimet 3,000,000 frs. (120,000*l.*) for his collection some time ago, only to meet with a decided refusal. The collection is completed by 12,000 volumes of Oriental literature, including 4,000 Japanese and 3,000 Chinese works. The only question remaining to be settled is whether the Municipal Council will erect a building worthy and capable of receiving this unique museum; and this point will be solved at one of its earliest sittings.

At its sitting of last Saturday, the Académie des Beaux-Arts proceeded to the election of a successor to the seat of the late M. Aug. Dumont, in the section of sculpture. As stated in last week's *Architect*, the only two candidates in the field were MM. Barrias and Mercié, decidedly the most distinguished of young French sculptors. The number of members present was thirty-six, and after three ballots, in which each candidate obtained eighteen votes; at the fourth essay M. Barrias was elected by nineteen against seventeen given to his competitor. The new member of the Institute obtained two "mentions" for busts in the Salons of 1859 and 1861, was Grand Prix de Rome in 1865, received a "second medal" at the Salon of 1870, a "first medal" in 1872, the "medal of honour" in 1878, a "first medal" at the International Exhibition of 1878, was created a Knight of the Legion of Honour in 1878, and promoted officer in 1882. His best known work is *Les Premières Funérailles*, exhibited at the 1878 exhibition.

The Salon jury in the section of painting has finished the first portion of its task, having examined every picture sent in; 2,378 works have been definitely passed, while 450 have been put aside for further examination. Of these, the jury will have to select 122 to make up the regulation number of 2,500. After this the drawings will be gone over to the number of 3,000, of which only 800 are eligible. Each work passed is marked either 1, 2, or 3, to indicate, except in the case of paintings of very large size, the row in which it is to be hung. The jury will have completed its work by the end of the present week.

The six competitors admitted to the final stage of the Grand Prix in medallion and jewel engraving have entered *loges*. The subject chosen by M. Cavellier for this competition is *Orestes at the Tomb of Apollo*.

The Roman antiquities discovered recently during excavations in the Rue Nicolle, and purchased from M. Landau by the City of Paris for 15,000 frs., have been placed on view at the Musée Carnavalet. The collection comprises 318 earthen vases of various shapes, glass vessels, utensils of iron and bronze, coins, skulls, and a cast made of the remains of a new-born infant of the fourth century.

The sale of oil and water-colour paintings, drawings, &c., by Louis Leloir, following the recent exhibition of the deceased artist's works, took place on Friday and Saturday of last week at the Georges Petit Gallery in the Rue de Sèze. The total amount realised in the two days was 135,000 frs.—*L'Eventail* fetching 10,200 frs.; two large panels representing *Hunting* and *Fishing*, 10,000 frs. together; *Un Intérieur de Harem*, 5,000 frs.;



*L'Arrivée du Printemps*, 3,600 frs.; *La Confiance*, 2,300 frs.; *La Fête du Grand Père*, 2,600 frs.; *Les Musiciens Ambulants*, 2,150 frs. Contrary to general expectation, the sale lacked "go," and there was a decided want of spirit in the bidding. However, considering the very incomplete state of most of the pictures, some of which were merely rough sketches or crude ideas, the prices realised were satisfactory. The sale of books, engravings, collection of arms, and other curiosities belonging to the deceased took place on Thursday, the 3rd inst.

M. Leopold Delisle, Curator of the National Library, has been elected President of the Committee on Parisian Inscriptions, in the place of M. Henri Martin, deceased.

M. Eugène Jolly, a promising sculptor, who had been confined to his bed by illness for some days, during an attack of delirium on Thursday, the 27th ult., threw himself out of a window on the third storey of his house in the Rue de Chartres, and was killed on the spot. The deceased was only thirty-seven years of age.

An extraordinary hitch has occurred in the first stage of the competition for the Grand Prix de Rome in painting. The subject given by M. Hébert, the artist delegated by the Académie des Beaux-Arts, was *Jesus Christ insulted by Soldiers in the Prætorium*, to be executed within twelve hours in the form of a sketch in oils on a canvas measuring 16 inches by 13 inches. At the last moment the competitors drew up a joint protest against this subject, on the ground that a similar one had been quite recently given in another competition. The painting section of the Academy was in favour of overruling the objection, but the Academy as a whole decided in favour of the students and cancelled the competition, which has been put off until next Monday.

English *habitués* of the Louvre on their next visit will find a considerable difference in the *Vénus de Milo*, which has been lately removed from its own gallery and erected provisionally in the Circular Room of the Musée des Antiques, before the red curtain that separates this room from the Seasons Gallery. The statue itself is also changed, the plinth having been shortened so that the fold of the robe training on the ground behind and to the left may be seen; the marble has, moreover, been cleaned, and now possesses an appearance scarcely in keeping with its character as an antique.

This week has been a busy one for would-be exhibitors in the architectural section of the Salon. According to the regulations their works had to be sent in between the 2nd and 5th inst., and any arriving after 5 o'clock this (Saturday) evening will be inexorably refused. Each exhibitor may submit two works, and has the right of sending also models in relief. The vote for the jury in this section will take place at the Palais de l'Industrie on Monday, the 7th, between 10 A.M. and 4 P.M.

### BRONZE CASTING.\*

BRONZE casting, a sumptuary art, followed for a long series of ages the fortune of the people who practised it; in Greece it reached its zenith during the reign of Alexander the Great, it was in a brilliant condition in Rome under Julius Cæsar and Augustus, in the reign of Nero it rapidly declined, and it was almost abandoned with the fall of the Roman Empire and the disappearance of Roman civilisation; during the invasion of the barbarians it is scarcely mentioned, and in the following ages its employment was confined to articles of household and daily use.

From this period we must pass without transition to the Middle Ages before meeting with works that can be placed in continuance of the sculptural art of the ancients; it was not till the twelfth century that bronze casting was to a certain degree revived, but in the fourteenth century such works were produced as the gates of the Cathedral of Pisa, and in the fifteenth century it had again reached its zenith, when the method of *la cire perdue* was in full vogue, and was employed by Ghiberti in casting his celebrated gate of the Baptistery at Florence, as well as generally by the sculptors of that period, especially by Benvenuto Cellini, who gives in his memoirs a detailed account of the process as employed by himself in casting the celebrated group of *Perseus and Medusa*.

All the beautiful statues of the Renaissance were cast *en cire perdue*; the result, however, was often uncertain, and the statues had frequently to be repaired and cracks and holes filled up in a way that is still visible in many cases. It is to be remarked that each bronze statue of that period was unique, since the model itself, as well as the mould, were broken up in the casting, thus rendering repetition impossible, and consequently greatly enhancing the value of every work of art thus produced. It is probable that certain artists employed different methods, as Benvenuto Cellini says of himself, but the basis of this system of casting was, and must have been, the same for all.

The artist who intended producing a work in bronze began by making a model of it in clay; this was baked, and served as the core, which was then covered with wax, and the work was completed by the artist in that material. The wax itself was then covered with repeated layers of prepared earth to form a mould, and the whole mass was then fired in a furnace, when the wax melted, and in melting left between the mould and the core a space of the required thickness of the bronze, and into this space the molten metal was run. What has hitherto prevented modern artists from employing this system is the circumstance that if the casting should fail the whole work is lost, including the original model.

By the process now employed at Brussels this is obviated, and if the casting fails it is only the labour of the founder that is lost. The model remains, and from it a fresh wax statue can be produced which must be repaired either by an artist employed for that purpose at the foundry or by the sculptor himself, who can then add the finishing touches to his work. It is the minute delicacy and accuracy with which every touch of the sculptor is preserved that gives the stamp of individuality and artistic value to works produced by this process.

The art of casting in bronze became naturalised in France under Francis I., who invited Benvenuto Cellini and other Italian artists to establish themselves in France, and built several foundries, the principal one being that of Fontainebleau; the manufacture of bronze was not, however, firmly established in France till 1684, when the Arsenal Foundry was built by Louvois, and placed under the direction of the brothers Keller.

The colossal equestrian statue of Louis Quatorze by Girardon was cast by the brothers Keller; it was intended originally to be placed on the Place Vendôme, then Place Louis le Grand, but was broken up at the first Revolution; one foot of the horse is, however, preserved in the Louvre as a specimen of the excellence of the bronze, the beauty of the work, and the colossal proportions of the statue, which was 7 mètres (about 26 feet) high, and was cast *à la cire perdue* at a single jet. The three legs of the horse, supporting the principal weight of the statue, were made of solid wax without a core, and consequently when cast became solid bronze, while the rest of the statue was only 16 millim. (five-eighths of an inch) thick. The weight of bronze required in this process is calculated at ten times that of the wax employed, and in this statue 3,000 kilog. of wax and 30 tons of bronze were used in the casting. The brothers Keller were the last founders of renown in France; after them the art of casting in bronze by the wax process declined, and at the beginning of the present century all practical knowledge of it was lost.

The sculptor Falconet, who was a contemporary of the Kellers, became a bronze-founder from necessity; not having been able to find at St. Petersburg a bronze-founder who would undertake to cast his statue of Peter the Great, after waiting for more than two years, he acceded to the repeated request of the Empress Catherine II., and cast it himself *en cire perdue*. At the first attempt the mould burst before it was filled, and the whole of the upper part of the statue was defective; the second casting was successful, with the exception of some cracks and holes which were filled up with molten bronze so effectually that it was impossible to tell where the statue had been repaired.

Although Falconet does not describe at length the manner in which he cast his statue, he mentions incidentally that he employed the wax process, since he relates that the bronze-founder Ersman, one of those to whom he had applied, declared that Falconet must be mad to attempt to cast a statue of that size with wax only three lines (a quarter of an inch) thick, that such a thing had never been done before, and that if he persevered in attempting it the casting would inevitably fail. Falconet remarks that in casting this statue twice he had learnt two things: first, that the modern art of casting colossal statues was imperfect, and, secondly, that it might be rendered perfect if sculptors and founders chose to take the trouble.

The bronze castings made under the First Empire were from moulds made on plaster models by an ingenious method known by the name of *moulage à la Française*, which is now employed in all French bronze foundries; it has the advantage of being economical, especially for large works, and is generally used in all the foundries of the north of Europe; it resembles in some respects the system practised in iron foundries, and is now employed even in Italy in preference to the wax process.

It must also be remarked that casting *en cire perdue* is not suitable for every style of sculpture. Works, for instance, requiring a smooth surface can, and indeed ought to be, cast by the ordinary

\* From the Official Report by Sir J. Savile Lumley.



French system, which produces metal of a closer grain and more polished surface, requiring, however, the use of the chasing tool over the whole surface to efface the marks left by the joints of the piece-mould, and the entire removal of what is called *la peau de la fonte*, the casting skin or "epidermis" of the bronze as it comes from the mould, and which, in the wax process, constitutes its peculiar charm, reproducing as it does a perfect facsimile of the original work as it left the artist's hands.

The ordinary method of casting is more suitable to the bronze articles of commerce which require frequent reproduction, as well as for bronzes intended to be gilt or silvered and burnished. The wax process, on the contrary, is adapted to unique artistic works not intended for reproduction; the casting skin, however, so dear to the sculptor, diminishes to a certain extent the beauty of the artificial "patina," or bronzing, which is always more brilliant on bronzes that have been worked over with the file and the graving tool. Although casting in bronze by the wax process was given up in France at the beginning of the present century, it has never been lost sight of altogether in Italy, from whence occasionally specimens have been sent to the annual Exhibition of the Fine Arts at Paris.

### ANGEVIN ARCHITECTURE.

SOME interesting papers entitled "To Auvergne and Velay and Back," by Mr. E. A. Freeman, are in course of publication in *The Guardian*. The following is an extract from the one published on Wednesday:—

It is hard to know exactly what to call the varieties of architecture which sprang up in the eleventh and twelfth centuries to supplant the older form of Romanesque which had once been common to all Western Europe, but which Germany alone, instead of casting aside, clave to and improved. It is not exactly difference of style; we find the same construction, and to a great extent the same details, in buildings the general effect of which is utterly unlike. It is rather a fashion in building, especially in church-building, a preference for a certain plan, a certain proportion, a certain kind of general effect, rather than any difference in style strictly so called. In this it differs from the national and local varieties of Gothic, which are real differences of style as far as they go. An English Perpendicular and a French Flamboyant church will commonly differ a good deal in their proportions, but, with a general agreement of artistic principle, they will differ a good deal more in details. The French building will commonly be the loftier of the two; it will have an apse, while the English building has a flat end; it will have a vault while the English building has a wooden roof. This is the rule; yet some English churches are lofty and some French ones low; some English churches have apses and some French ones have flat ends. The thing which is absolutely distinctive of England is the wooden roof made into an ornamental feature. But all these differences do not make at all so wide a diversity as we see between a Norman, an Angevin, and an Aquitanian church, the smaller details of which, say the string-courses and the capitals of the small shafts, may be exactly the same. There is, as we have hinted, a very marked Angevin mode of building, a mode of which Anjou may be looked on as the head-quarters, though it stretches into lands on both sides of that county. But we hardly know whether to call it an architectural style. As far as details are concerned, the difference in all these varieties lies rather in the use of the details than in the details themselves. Thus we nowhere find on the Continent the rich doorways and chancel-arches of our own Norman; but the mere details of these doorways, taken one by one, might be found almost anywhere. One variety has square piers, another compound piers, another columns, another has no pillars at all. But, allowing for the rule that, the further south we go, the more Classical things get, such capitals as there are may be exactly the same. We therefore hardly know whether we ought to speak of an Angevin style; but there is a very marked Angevin style of building. The buildings of the twelfth century in Anjou, and in the lands to which Angevin influence reached, can be known at a glance from the buildings of the lands to the north and south of them.

The main tendency of this Angevin variety is to make everything broad, and, by proportion at least, low. In the churches this is carried so far as to dispense with aisles, and therefore with piers or columns of any kind, to make the nave and choir each a single wide body. This tendency is found also in some parts of Aquitaine; but it is nowhere so strongly dominant as in the region of Angevin taste. What is done with width is also done with length; the bays of an Angevin church are always wonderfully wide, perhaps double the width of those in an English or French church. A nave which in England would consist of six or eight bays will in Anjou consist of only three or four, each of which will most likely contain two coupled windows much larger than they would be in England. In everything the tendency is to have a few large members rather than many small ones. There is a certain boldness and simplicity about this kind of treatment; but there is also a certain bareness, and an Angevin church looks

both lower and shorter than it really is. The fault is in some measure the same as that which makes some of the great churches of Italy, Saint Peter's to start with, look so much smaller than they are through using a few wide arches instead of many narrow. The Angevin treatment of the bays is further connected with the use of a kind of vaulting which, without being really domical, as it is further south, has somewhat of the effect of a cupola. There is also a fondness for the use of the Pointed form in the main arches when it is hardly any more a sign of coming Gothic than it is in Sicily or Aquitaine. And there are some smaller peculiarities, as a fondness for marked corbel-tables inside which would look more natural outside, which add to the characteristic effect.

The fashion, then, is very marked, and all the churches belonging to it have much in common. Yet it is curious to see how much variety it allows in individual buildings. We have already spoken in a general way of the churches of Angers, most of which have some parts belonging to this style, if style we are to call it. If we look at them as specimens of special Angevin taste, we shall see that, with great general likeness, each brings in some little modification of its own. Saint Maurice perhaps carries out Angevin ideas more thoroughly than any other in Angers. A cross church with the limbs of the same height, without aisles in any part, the apse therefore standing free without surrounding chapels, after a fashion rather German than French—though the tall windows of the German apses are not to be seen at Angers—two western towers and something like a third carried up between them where the nave gable ought to be—all this makes an outline strange in itself, and forms a marked contrast with the outline of Le Mans, no less strange in its own way. As seen from the castle walls, the outline of the cathedral is perhaps not so very strange; it does not differ greatly from that of an ordinary French church with western towers, and with the crossing marked by a mere *louvre* or, as in this case, not marked at all. The lack of aisles is hardly seen, and the odd position of the towers does not strike the eye. But even in that view we take in something of the simplicity of the building; in most French churches, in many English, some inkling of pinnacles and flying-buttresses would have made itself felt. Saint Maurice, we need not say, has no need of them. When we come close to the church, a number of parasitic buildings on the south side hinder its whole outline from being clearly seen. But the east and west ends stand free. The apse, round below, polygonal above, with windows of early tracery, rises boldly above a small open space, where a noble wooden house almost divides our attention with the church. And the west front may be studied with ease in all the fulness of its eccentricity. Two western towers where there are no aisles are in themselves an anomaly, though it must be remembered that such was the arrangement of Ripon in its first state. One great tower, as at Alby, is surely more natural. Here we have two very narrow flat towers, without buttresses and with the middle stages slightly overhanging; the upper stages seem to be that kind of late imitation of Romanesque which is not uncommon in some of the towers further south. The front, remarkable for a single splendid doorway with most bold and striking sculpture, is otherwise as bare and flat as it well can be; the only relief that there ever could have been was a couple of blank arches on each side of the doorway. The history of these towers is odd. They were once finished with wooden spires, and were, like some German towers, joined by a wooden bridge. Early in the sixteenth century, about 1516, spires and bridge were rebuilt of stone, and one cannot help fancying that it was now that the upper part of the towers themselves was built. A series of changes now followed; a fire in 1531 caused a rebuilding of the north tower in a richer form, and the third tower, if such it is to be called, arose between the two, crowning the west doorway and window, instead of the gable of the nave, or in this case only so much of it as chanced to come between the two towers. It is of the same pseudo-Romanesque as the upper part of the towers, the cupola belonging more distinctly to the Renaissance. Altogether, strange but not beautiful, worth a journey because of its singularity, is the verdict which we must pronounce on the west front of St. Maurice of Angers.

When we go within, we find the Angevin idea most thoroughly carried out, except in the apse, which is surely later. The church does not do justice to itself in any of its dimensions. It looks far lower than it is, and three wide bays of the typical kind, three bays of Angevin vaulting, three wide, blank, pointed arches against the wall, in a space where anywhere but in Anjou we should have six bays, make it look much shorter than it is. One is really driven to believe that the Angevin architects did not wish their churches to look long or high, and the more we wonder at their taste, the more curious we find their works as a matter of study.

Messrs. Carter & Co., of Poole, have just completed two large hand-painted tile panels for Messrs. W. E. Williams & Son, architects, of 2 Ludgate Hill, at the following addresses:—"The Shakespeare," Meyrick Road, Battersea, and "The Welsh Harp," Aylesbury Street, Clerkenwell, representing respectively a scene from "As You Like It," and "The Massacre of the Welsh Martyrs." Both works have been highly commended.



## NOTES AND COMMENTS.

ONE hundred and twenty-seven designs for the new Admiralty were received on March 1, and on the last day of the month it was officially announced that nine designs had been selected, the authors of which will be invited to take part in the second and final competition. The selection of ten designs was anticipated; for although the condition stated that the judges had power to select such less number as they may think fit, it is usually the practice to give as large a number as possible a second chance. The list will be a surprise to many. With two exceptions (Messrs. VERITY & HUNT's and Messrs. ASTON WEBB & INGRESS BELL's) the designs selected are not those which were generally supposed to be likely to gain success, and until an exhibition is held there will be dissatisfaction with the decision.

THE names and addresses of the authors of the selected designs are as follows:—Messrs. GLOVER & SALTER, Queen Anne Chambers, Poultry, E.C.; Messrs. HENRY HALL & W. H. POWELL, 19 Doughty Street, Mecklenburgh Square, W.C.; Messrs. LEEMING & LEEMING, North Gate Chambers, Halifax; Messrs. MAXWELL & TUKE, 29 Princess Street, Manchester; Mr. THOMAS PORTER, Dulwich Wood Park, Norwood, S.E.; Messrs. SPALDING & AULD, 91 Queen Victoria Street, E.C.; Messrs. MALCOLM STARK, jun., and JAMES LINDSAY, 248 West George Street, Glasgow; Messrs. VERITY & HUNT, 27 Regent Street, S.W.; and Messrs. ASTON WEBB & E. INGRESS BELL, 19 Queen Anne Gate, Westminster, S.W. Six of the designs, it will be seen, were produced in London. There will be a supplementary set of conditions issued for the second competition. The new plans will be on a scale of 16 feet to the inch, instead of 24 feet, and will become the property of the Government. Each selected competitor is to be paid 600*l.* towards his expenses.

THE last Yorkshire Fine Art and Industrial Exhibition, although it was unusually attractive in pictures and other works, has not been a financial success. Compared with the former year's returns there has been a decrease of 129*l.* in payment for admission, 122*l.* in the rent for space, 330*l.* in season tickets, and in other items 107*l.*, making in all a decrease of 688*l.* These figures are another proof of the depression which has been overspreading the country. The sum will be borne by the guarantors, and is not likely to deter the promoters from holding another exhibition.

THE paper read by Mr. ELIJAH HOOLE at the Society of Arts on Wednesday upon "Workmen's Dwellings" is an important contribution to the discussion of a pressing question. Mr. HOOLE considers the best way of giving accommodation to a class that is regarded as a residuum by the conservators of the ordinary model dwelling. Cardinal MANNING, who presided at the meeting, said that benevolent people overlooked the enormous difficulty of rehousing the poor, as they seemed to think that houses which were unfit for human habitation ought to be demolished at once, and suitable houses erected forthwith on the sites. Mr. HOOLE was able to point out some cases in which the best intentions were defeated by existing laws. In one wretched court in the City it was found impossible, owing to rival interests, to adopt any other course than the selling of the freehold or the keeping of the old houses in some sort of repair for labourers' dwellings. The Commissioners of Sewers would not allow the latter course, the tenants were ejected, the owners are unable to rebuild the houses for them, and thus the ground is certain to be covered with warehouses and offices.

THE Metropolitan Building Acts, according to Mr. HOOLE, are inadequate to meet the difficulties which beset the sanitarian in respect to overcrowding. They contain no restriction upon the conversion of a house into tenements, and require no additional sanitary or other provision for the twenty or thirty extra people crowded into them, and no adaptation to their new purpose. The Acts define the size of a hearth to an inch, and they prescribe the thickness of a wall to half an inch, they enlarge at great length upon that sacred institution the party-wall, but not one word is said against making a house built for one family serve for ten, nor, if this is done, do they prescribe any addition whatever to the arrangements or accommodation. It is no exaggeration to speak of such excessive

overcrowding. There is a court in St. Pancras of which the freehold belongs to one of the City Companies, and at one time the houses which were built for a single family contained a family in each room. As Cardinal MANNING said, how is it possible to maintain domestic relations when a family is cooped up in a room nine feet square and seven feet high?

FEW people who have not had occasion to investigate the district have a notion of the network of courts and alleys which exists between Paternoster Row and Newgate Street. Panyer Alley, the nearest to Cheapside, is not to be taken as a specimen, for it is nearly straight; but some of the others are blind alleys, or are connected in a way that puzzles the stranger. In all London there is no place less adapted for the operations of a fire brigade. On Wednesday evening a fire arose in a printing office in one of the narrowest, and but for the promptitude with which Captain SHAW was on the spot, it is impossible to say where the damage would have ended. The question deserves consideration whether, considering the proximity of St. Paul's Cathedral, more care should not be demanded in the erection of buildings in the neighbourhood. Flimsy structures can be put up so long as the provisions of the Building Act are satisfied. But the numerous warehouses and manufactories around the Cathedral should be constructed only of fireproof materials, or of materials that will burn slowly. The ease with which the buildings in the Row were destroyed on Wednesday night must give rise to grave apprehensions in respect to the ultimate fate of St. Paul's.

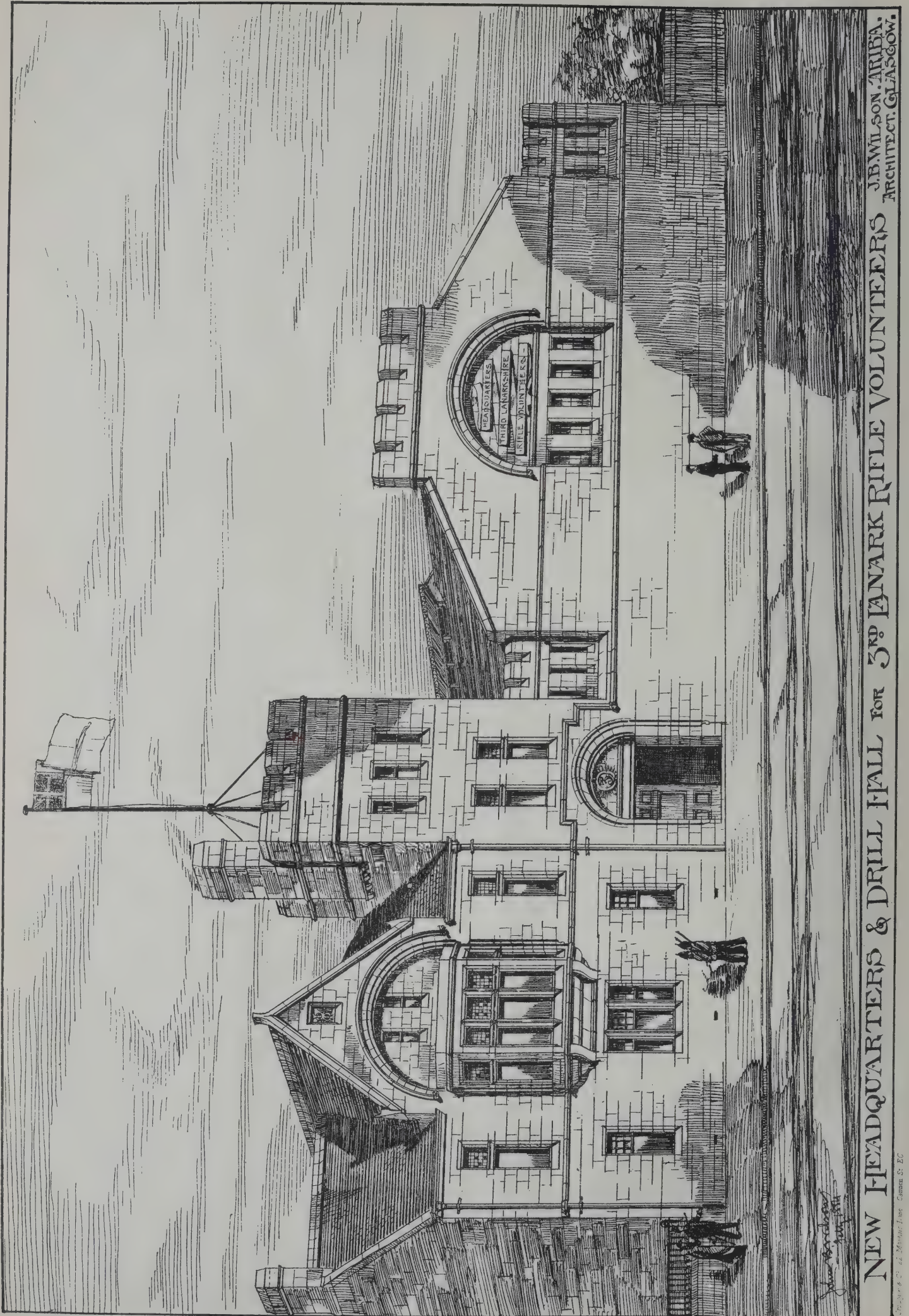
THERE was an example of the lack of mercy which always marks attacks on architects in the string of questions relating to the architect of the Irish Board of Works which were addressed to the Secretary of the Treasury, on Tuesday, in the House of Commons. They are worth printing as a curiosity. The Secretary was asked whether Lord CRICHTON's Commission of Inquiry had not recommended that Mr. OWEN, architect to the Irish Board of Works, should be called upon to resign; for what reason the recommendation in question has never been carried out; if Mr. OWEN, while holding the position of architect to the Board, was also chairman to a discount company which became insolvent, and whether he has likewise, in recent years, acted as director of several commercial speculations which resulted in failure; if Mr. OWEN, whilst an architect to the Board, officially concerned with the business of dealing with applications for loans of public money to tenants and other persons, was also chairman of a private loan company, and whether, in consideration of his resigning the chairmanship in question, the Treasury allowed him an increase of salary of about 200*l.* per annum; and what is the explanation of the course pursued with regard to Mr. OWEN. There was no difficulty in giving replies. Mr. OWEN had been the chairman of a Civil Service building society, but at the suggestion of the committee he resigned that post and the chairmanship of the discount society. His increase of salary was simply a reward of long years of good service to the State.

THE French have always excelled us in the preparation of handbooks on literary, artistic, and scientific subjects. England has no series that will bear comparison with the old "Maitre Pierre," the "Bibliothèque Populaire," the "Petits Traités" of the Academy, the Manuels Roret, &c. An important addition to publications of that class is about to be issued from the Librairie de l'Art, under the title of "Bibliothèque Populaire des Écoles de Dessin." There are to be three classes of handbooks, which will be addressed to elementary students, advanced students, and the general public. The first will comprise books on construction—the orders, anatomy, decorative composition, stone cutting, &c. The subjects of the second class will be the applications of art, as seen in tissues, paper, enamels, ivories, furniture, arms, bijouterie, &c. The two will correspond with the courses in the art schools. The third class will consist of volumes on costume, the art of various ages and countries, the great French museums, sculpture, architecture, &c., and the treatment of the subjects will be more popular. The volumes have been prepared at the suggestion of professors, and are another proof of the vigorous efforts which are being made by all classes to retain the old supremacy of France in industrial art. M. RENÉ MÉNARD, one of the professors of the École Nationale des Arts Décoratifs, is the editor. In order that the series may be available to all students and apprentices, the price of each volume will be only 75 centimes.









J.B. WILSON, ARCHT.  
ARCHT. GLASGOW.

NEW HEADQUARTERS & DRILL HALL FOR 3<sup>RD</sup> LANARK RIFLE VOLUNTEERS







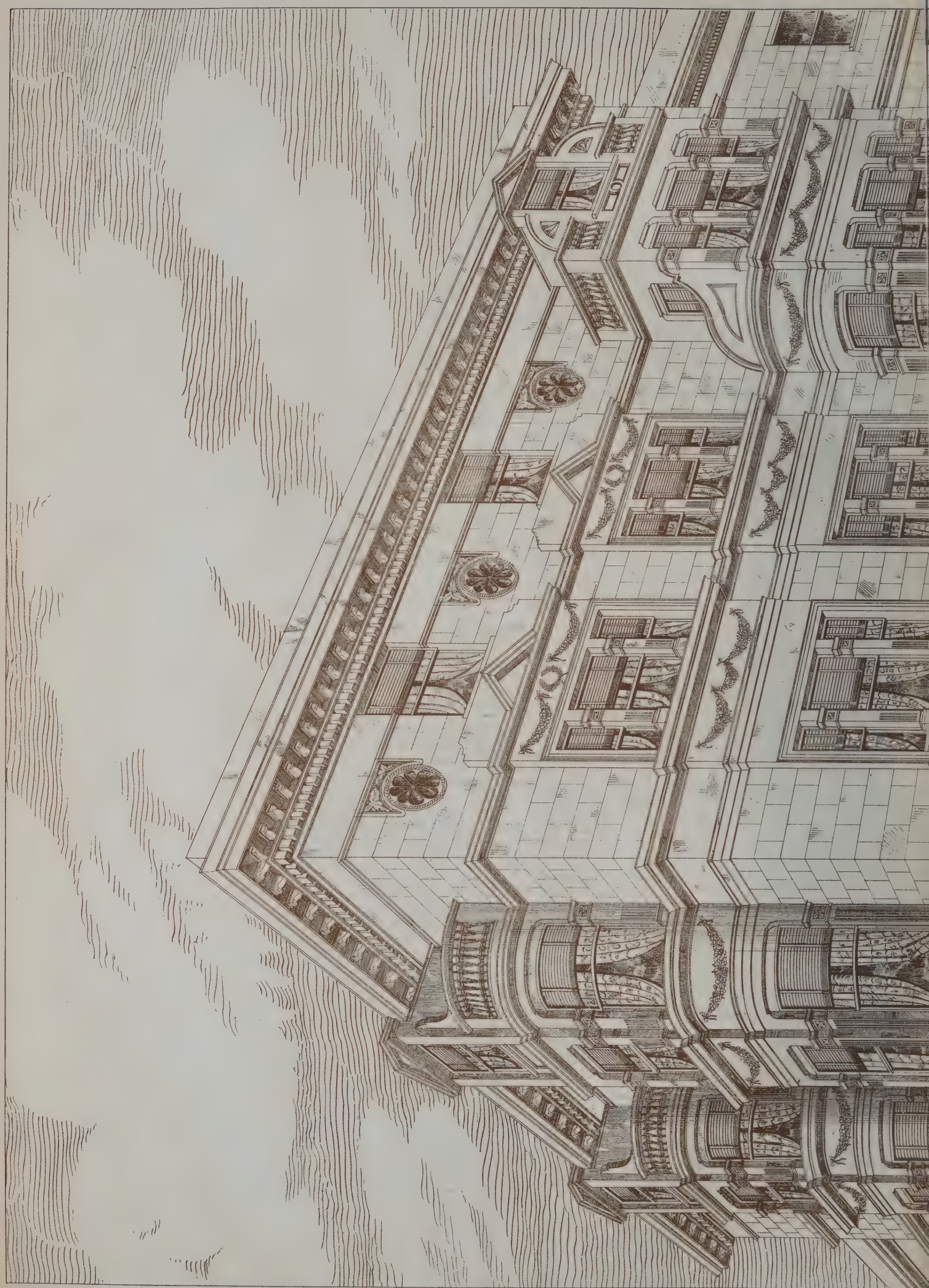


RESIDENCE, HOOLE ROAD, CHESTER.  
F. ROBERTS, ARCHITECT.

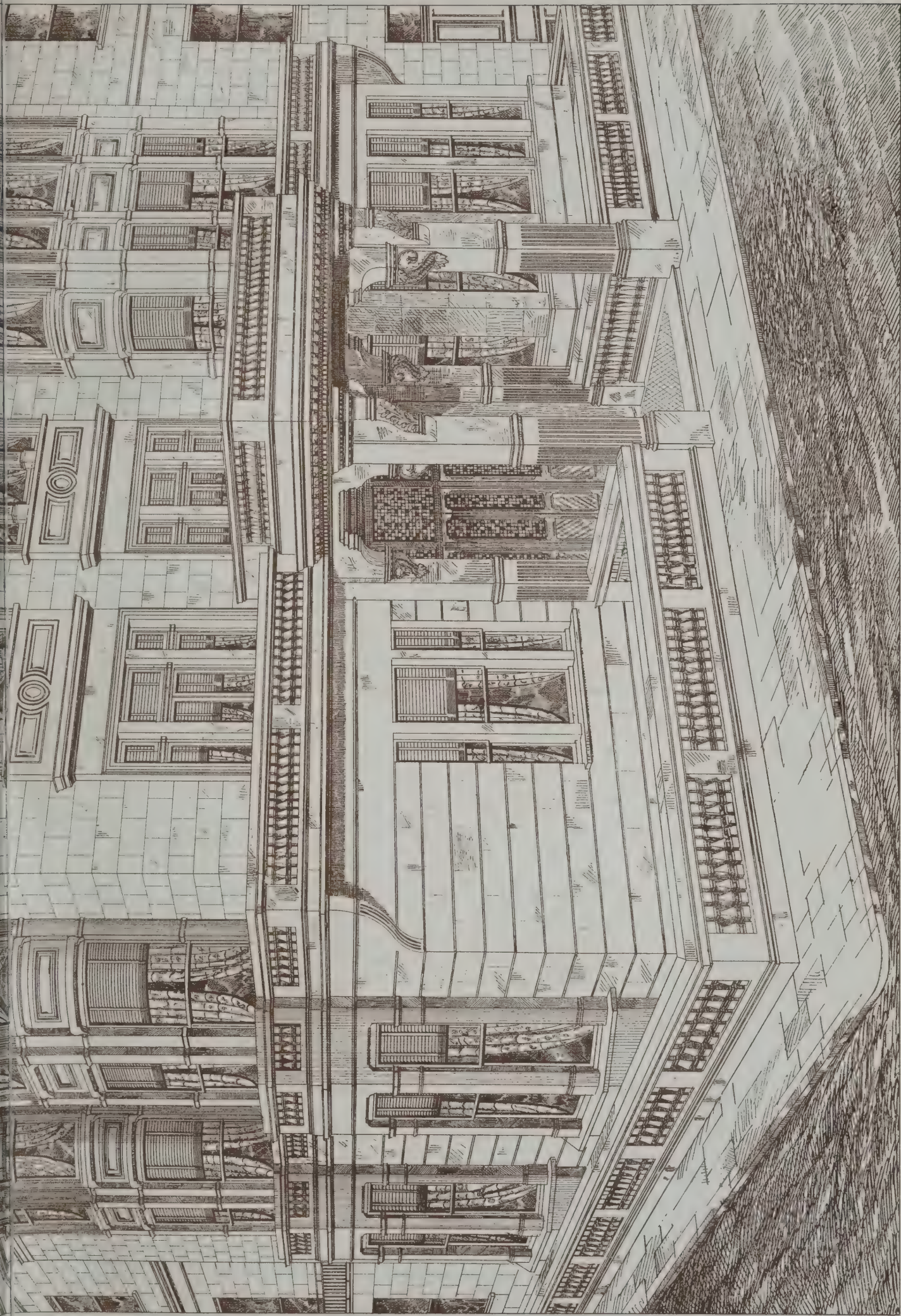












Architectural Drawing of the Gentlemen's Club, St. Leonards-on-Sea.

GENTLEMEN'S CLUB, ST. LEONARDS ON SEA.

H. WARD, A.R.B.A. ARCHTCT.









RESIDENCE, WEST FERRY, DUNDEE.  
BELONGING TO R. MUDIE ESQ.  
G. S. AITKEN, ARCHT.









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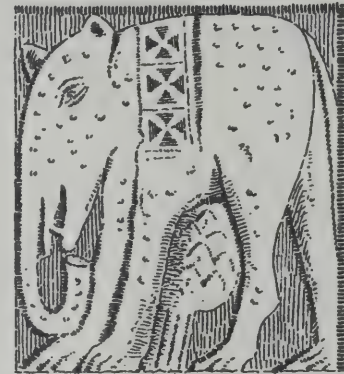
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## An Ivory Casket

Eastern? 12<sup>th</sup> Cent



Front



Front



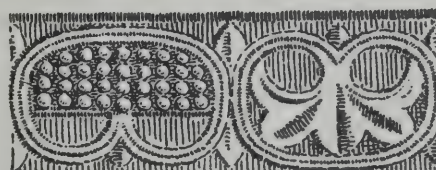
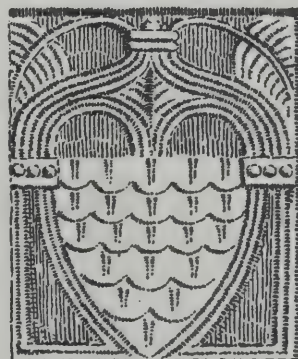
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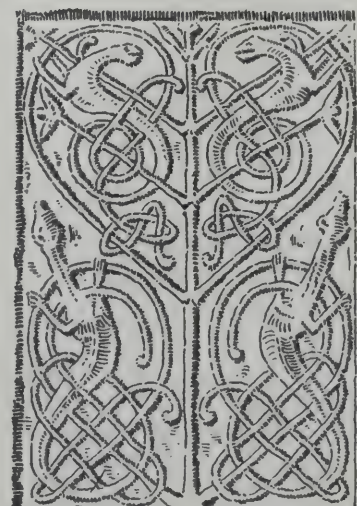


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Portions of a  
Runic Casket  
(Ivory)  
Northern 9<sup>th</sup>-11<sup>th</sup> Cent.









## ILLUSTRATIONS.

GENTLEMAN'S CLUB, ST. LEONARDS-ON-SEA.

THIS building is now in course of erection for the directors of the new club company. It occupies one of the finest sites on the Parade, in the most fashionable part of St. Leonards, and commands magnificent views of the sea coast and Parade.

The new club will contain large coffee, smoking and billiard-rooms, and card-rooms; also ten bedrooms, bath-room, &c., for the convenience of London and country members. The chief entrance to the building faces Warrior Square, and will be protected from the winds by a large porch, the floor of which, as well as the whole of the corridors, lavatories, &c., are to be laid with marble mosaic by Mr. BURKE. The grand staircase and entrance framing, &c., will be of polished walnut. The building will, in all probability, be lighted by the incandescent electric light, for which the necessary arrangements have been made. The architect to the company is Mr. HENRY WARD, A.R.I.B.A.; Mr. PETER JENKINS is the contractor.

RESIDENCE, WEST FERRY, DUNDEE.

THIS house, just completed, is situated three miles east of Dundee. The grounds are elaborately laid out, and with the view of preserving the best points of outlook. Southwards are the Fife Lomonds and Northmen's Land. The river Tay is visible from near Perth to its estuary. On the opposite shore lie the ancient villages of Newburgh-on-Tay and Balmerino. To the south-east are visible the towers of St. Andrew's. On the north stretch the Sidlaw Hills, with the intervening fertile valley of Strathmartine.

The house is planned to furnish the accommodation usual in a modern residence. The interior is ornate, and has been carefully finished by the different tradesmen. The work has been carried out from the designs and under the superintendence of Mr. G. S. AITKEN, architect, of Dundee.

HEADQUARTERS AND DRILL HALL, GLASGOW, FOR THIRD LANARK RIFLE VOLUNTEERS.

OPERATIONS have just been commenced for the erection of new drill hall and headquarters for the Third Lanarkshire Rifle Volunteers, on a most convenient site in Coplaw Road, in the southern district of Glasgow. Plans for the building have been prepared by Mr. J. B. WILSON, A.R.I.B.A., Glasgow, one of the officers of the regiment, and we publish this week a perspective view of the principal front, from the architect's sketch design.

The drill hall will be 142 feet long by 72 feet 6 inches wide inside, and will be roofed in a single span with an iron roof, leaving the whole floor space free of any obstruction. The roof will be lined internally with stained and varnished wood lining, the iron construction exposed and decorated. The interior walls of hall and all passages will be lined to a height of 5 feet with white enamelled bricks relieved with coloured bands, and above to the wall-heads with fine red pressed bricks also similarly relieved. It is intended to lay the floor with solid wood-block flooring set herring-bone pattern. As there are at present no halls suitable for large public meetings in the district, the scheme proposes to meet this requirement, as well as to provide suitable accommodation for the regiment. For this purpose the drill hall has attached a large platform or stage, with suitably-arranged retiring and dressing-rooms, and other accommodation.

Besides the drill hall, there are on the ground floor of headquarters a large reading and meeting-room for members, sergeants' room, quartermaster's office and store, armoury and armourer's workshop, lavatories, &c.; and there will be also a large and well-appointed gymnasium. On the first floor are officers' mess-room, adjutant's room, and orderly room, with lavatories, &c., and above are dressing-rooms fitted with uniform lockers, &c., and the caretaker's house.

It is expected that the buildings will be entirely completed in time for the winter drills, which commence early in January. The estimated cost is about 4,000*l*.

HOUSE, HOOLE ROAD CHESTER.

THIS building has been lately erected, from the designs of Mr. F. ROBERTS, architect, Chester.

CASKET, SOUTH KENSINGTON MUSEUM.

THE casket which forms the subject of the illustration is one of those early works which are to be found at the South Kensington Museum, although it is generally supposed that the examples do not extend so far. The sculpture in this case is remarkable, and, like much other Runic work, gives opportunity for archaeological discussion. The original drawing is by Mr. JOHN E. INGLIS.

## THE ARCHITECTURAL ASSOCIATION.

THE tenth ordinary meeting of the Association was held on Friday evening, the 28th ult., Mr. Cole A. Adams, president, in the chair. A vote of thanks was passed to Mr. Anderson, the architect of the Scottish National Church, Belgravia, for conducting the members over the building. The next visit was announced for Saturday (to-day), April 5.

The PRESIDENT then referred to the decease of Prince Leopold. Englishmen, as a body, were entirely in sympathy with Her Majesty in this terrible loss. It would be out of place for them to pass anything in the shape of a vote of condolence, but he thought they might express silently their sympathy with the Queen, and their regret at the loss that art and literature had sustained in the death of the Prince, who, though young in years, was pre-eminent in learning.

Mr. W. E. RICH then read a paper on—

## Water Supply to Country Houses and Isolated Public Buildings.

In every age of the world and in every clime the prudent man has pitched his camp and built his house on a site where good water can be obtained. A good foundation is necessary for the stability of the building, but the water supply is equally essential to make it habitable. Of many an ancient dwelling or village even the ruins have perished, but the spring or well, which was the oldest institution in it, remains and still attests the prudence of the founder. The British or Roman camp, wherever it was situated, could not withstand a siege without a reliable water supply, and it is most interesting to those who study such works to identify the source of water in each case. Frequently there was a well within the circumvallation. In other cases there was a well or spring external to the walls, with a covered way, which is easily identified now, for the protection of those who sallied out to it for water. In others the camp was extended on one side towards the valley specially to include some spring. I should think it probable that in some of the Roman camps on the elevated chalk downs of southern England, storage reservoirs and gathering grounds, and perhaps even ponds, were sometimes constructed for their water supply. In the mediæval castle the well is still pointed to frequently as an object of note—e.g., the wells at Carisbrook and Warwick. When the beleaguered garrison depended only on the surrounding moat for its supply, we frequently hear that it was decimated by disease, and surrendered in consequence. The old English monastery was generally placed beside a stream which drove the mill, and was dammed up to form the fish-stews, and there was almost invariably a good well or spring within the enclosure. The homesteads and villages of old England clustered round the springs of water, and the highways passed by them; and the same process of natural selection of sites for habitations still goes on in every new country which is being rescued from the waste. As a rule the habitation was taken to the water, and the first tendency, no doubt, was to place it beside a running stream and dip out of it; but the stream failed or became foul in summer, and was muddy after rain, and the settler would soon follow it to its source, and prefer the clear spring where it first bursts forth. If that is situated, however, in a position unsuitable for the dwelling, the ingenious man would either convey it by an aqueduct, as was no doubt often done in the luxurious days of ancient Rome, or would make an artificial spring by digging a well on the site of the house.

No doubt there have been blunderers in times gone by who have neglected such principles as I have enumerated above. From my own experience I am tempted to think that the nineteenth century must shine pre-eminent in the instances it affords of houses built without a thought of whence water is to be obtained. No doubt there is a natural tendency at the present day to select more elevated sites than formerly for our dwellings, and this has something to do with the evil. The man escaping from the smoke and close atmosphere of a city, where he gets all the water he wants without even thinking whence it comes, naturally seeks a bracing situation on high ground, perhaps close to the summit of a hill, and too often starts his house before he has given a thought of where the water which will minister so much to the future comfort and health of his household is to come from.

Now it has fallen to my lot to give considerable attention to the subject of water supply to isolated country mansions and public institutions during the last sixteen years, and too frequently, I regret to say, I have only been called upon for advice when



the building has been already nearly completed. I venture to think that the hydraulic engineer's opinion might with most advantage be sought at an earlier stage, when the exact site for the house is being selected and the general plans and elevations are under discussion, as it is a great gain to have the house in proximity to a knoll higher than its roof, on which a reservoir of ample dimensions can be constructed; and, in the absence of such natural advantages, a tower, capable of receiving a large elevated tank higher than every part of the roof, should be a notable feature. The provision of water on the site selected should also be one of the earliest operations, as the cartage of water is often a serious item in a builder's estimates, and in some cases would help materially towards paying the cost of the permanent waterworks.

A direct gravitation supply from a natural spring or stream higher than the house is in every way the best when it is obtainable, as it is frequently in the hilly districts of the north and west of England, Wales, and Scotland, where the rainfall is large and the rock surfaces are almost impermeable; but in the cretaceous and oolitic districts of the south and east of England elevated streams are rare. The Earl of Kenmare's house at Killarney is supplied from springs about  $1\frac{1}{2}$  miles distant. They yield about 15,000 gallons per day, and are collected in a covered reservoir holding 30,000 gallons, and situated at an elevation of 110 feet above the house floor. The water is conveyed thence to the house in a 4-inch cast-iron pipe, which bifurcates into fire-mains and service-pipes for drawing water direct all over the establishment. When water is very scarce on high ground, material dependence has to be placed on the rain-water gathered from the roofs into large storage reservoirs; and it is well known in the west of England that the rainfall on the roof of an ordinary agricultural cottage will suffice for all requirements of its inmates if a moderate capacity of storage reservoir be provided. For large establishments so situated an artificial gathering ground is preferable. At Sir Greville Smyth's, at Ashton Court, near Bristol, a half-acre plot of sloping ground, near the summit of a hill behind the house, is covered with a floor of impervious concrete, with surface gutters for conveying any water falling on it to a 40,000 gallons covered reservoir below. For every inch of rainfall upon this area about 8,000 to 10,000 gallons of water should be delivered into the reservoir. When gravitation supply is impossible there is no help for it but to have recourse to artificial pumping in some shape or other, and the several ways of pumping must be considered. But it is well to consider the question of pumping with that of the source of supply. A well should be like Cæsar's wife, above suspicion. It should never be in or very near an inhabited house. The further it is off the better. It is better closed in than open. The number of hand-pumps in the world probably exceed that of any other machine, and most small private establishments in the country depend on such pumps for their water supply, but they are ill-fitted for large houses full of modern sanitary appliances and other apparatus for using and wasting water. A man working a hand-pump for an hour would scarcely do more than 60,000 foot-lbs. of useful work in that time. One gallon of water weighs 10 lbs., so if the water in the well is 100 feet below that in the tank to be supplied, he will only raise 60 gallons in that time. Similarly, if two men work together, they will raise 120 gallons in that time, and if the gross lift be only 50 feet, they will, together, raise 240 gallons, but even that is no more than a leaky water-closet will waste in twenty-hours without being noticed. The nineteenth century rebels against the employment of thinking beings as mere "drawers of water," and thus it is better to replace manual with horse-power in large establishments. Roughly, a horse would do about ten times as much as a man, or would raise about 600 gallons per hour 100 feet. Working six hours a day a horse would thus raise about 3,600 gallons, but he would not be fit for much other work afterwards in the same day. When a horse is employed it is better he should be yoked into an ordinary pole horse-works, with a circular path from 20 to 24 feet diameter, and he would work at two and a half miles per hour, and should thus drive three throw pumps. Twenty years ago an American type of horse-works, in which the animal stood on an endless band and pressed it backwards beneath his feet, was much employed, but it was found to be very dangerous, and many excitable horses were killed or ruined in working them. Mules or donkeys are frequently used similarly for pumping, and, considering the sorry fare which contents them, are more economical *pro rata* than horses.

The lecturer then went on to explain in detail the numerous mechanical appliances for pumping purposes—water-wheels, windmills, steam and gas engines, &c., and gave a full description of the hydraulic ram and its action. He next went fully into the subjects of reservoirs, water mains, constant service, fire service, &c., hydraulic lifts, filtration of water, &c., and concluded with examples of works carried out on various estates and mansions and public institutions. Allusion was made among these examples to Worcester Cathedral, which Mr. Rich spoke of as an isolated building in the middle of a city. There was an immense amount of wood-work, he said, in the tower, for carrying the bells. This wood-work was very dry, and far above the reach of the fire-engines in the city. To meet the risk of fire, engines had been placed in the crypt to work pumps. A pipe was carried up into

the tower, with fire-cocks and hose at every stage, providing a supply of water to any portion of the tower where it might be needed. By means of a rose and spray a thick rain of water could also be showered all over the wood-work in the tower.

Professor KERR proposed a vote of thanks to Mr. Rich for his lecture, which was, he said, one of the very best he had listened to in his life. As a member of the Society upstairs, he must say he envied the members of the Association upstairs—they did not get such lectures. Mr. Kerr, in the course of his remarks, observed that we had a great deal too many pipes in our houses—pipes for drainage, gas, heating, and water-supply. Some houses were more filled with pipes than anything else. When a lady or gentleman took a complete fancy for filling the house with pipes, the end was that the pipes became so numerous and so complicated that, instead of being a benefit, they were the contrary, and, metaphorically speaking, the house was always in hot water. Mr. Rich had shown how simple a matter the complete water-supply became, if administered on the proper principle, and how it could be brought to the house, and distributed over the house in a proper way, and without a constant reference to repairs; and thus enabled the inmates to maintain health and cleanliness, for both of which water, and water in large quantities, was necessary. It was to our discredit in this country that we did not value water-supply as we ought. The London water-supply was a disgrace to human ingenuity, and when we looked at what had been done in New York on the one hand and in Glasgow on the other, it was impossible to think how the London water-supply could be submitted to.

Mr. L. C. RIDDETT seconded the vote of thanks, and

Mr. H. D. APPLETON also spoke in support of it.

Mr. HEATHMAN, manager to Messrs. Merryweather & Son, considered the system of roses and sprays objectionable on the score of insufficiency to cope with fire, and the difficulty of testing them periodically.

The PRESIDENT then put the vote to the meeting.

Mr. RICH replied, and, in the course of his reply, alluded to Mr. Heathman's observations on Worcester Cathedral tower, saying that he himself did not consider a spray alone was to be relied on. Still it was something, and in addition to this there were the fire-cocks and hose on every stage, all of which would do good service if the need arose. The jets also were tested periodically.

## ARCHITECTURAL EXAMINATION IN GLASGOW.

AN examination in architecture in connection with the Royal Institute of British Architects was held in Glasgow in the last week of February. The following is a list of the candidates who have been successful, the names being given alphabetically:—Jas. Ledingham, 1 New Ivegate, Bradford; Alexander M'Gibbon, 8 Douglas Street, Glasgow; James A. Williamson, 2 West Preston Street, Edinburgh; and Alexander B. Wilson, Brisbane, Queensland. The candidates who have passed are now eligible for election to the associateship of the Institute. As this is the first examination of the kind that has been held out of London, a few particulars regarding it may be noted. The candidates were first required to submit probationary drawings, and these being approved of were admitted to the examination. The first four days were occupied in answering, in writing and by means of sketches, the questions contained in a series of printed papers supplied by the Board of Examiners of the Institute, and among the subjects embraced were the following:—The history of architecture, sanitary science, strength of materials, shoring, construction, the writing of specifications, estimating, and professional practice. In the history of architecture the candidates are required to show a general knowledge of the leading architectural styles, and a more particular acquaintance with some one style selected by the candidate himself. The examination included the planning and designing of a building for a given site, a list of the accommodation required being furnished. On the fifth day the oral examination took place, and was conducted by Mr. Arthur Cates, chairman of the Board of Examiners, and Mr. J. Macvicar Anderson, hon. secretary of the Institute, and a committee of the Glasgow Institute of Architects appointed for the purpose, of which Messrs. Campbell Douglas and T. L. Watson were convener and sub-convener respectively.

## THE MANCHESTER ART MUSEUM.

ACCORDING to the *Manchester Guardian* a serious difference has arisen between the members of the Manchester Art Museum Committee and the Parks and Cemeteries Committee of the Corporation, relative to the space which it was understood the Art Museum Committee were to have at their disposal in the new art gallery in Queen's Park. The position of the latter body has been fully set forth in a letter addressed to the Parks Committee, which was laid before them and considered at their meeting on Friday. Mr. Horsfall and his colleagues assert that there was a distinct understanding that the whole of the space on the first floor



of the new museum would be entrusted to their charge for four years. With this assurance the committee of the art museum collected funds and enlarged their collections, which now contain works of art estimated to be worth at least 5,000*l*. Since, however, the intimation from the authorities of South Kensington that they would if necessary lend as many works of art as would fill the building, the chairman and the treasurer of the Art Museum Committee have been informed that the Parks Committee "do not consider that they have promised to carry out the conditions specified in the offer made by the Art Museum Committee, and accepted on May 12, 1882, by the Parks Committee." On this point it is remarked that "those conditions were distinct, specified, and thoroughly understood on both sides when the resolution of May 12 was passed," and the proposals since made by Mr. Alderman Harwood "amount to a virtual repudiation of the agreement." Under the circumstances they are compelled to ask the Parks Committee to carry out in its integrity the agreement made with them, that they shall have the management of the rooms on the first floor of the museum for four years from the time of opening. It was left to the chairman, deputy chairman, and town clerk to consider the letter and prepare a reply on behalf of the Parks Committee.

### THE WELLINGTON STATUE.

IT is understood that the General Committee whom the Prince of Wales, with the sanction of the Queen and of Her Majesty's Government, some time since invited to co-operate with him for the proposed improvements at Hyde Park Corner, have agreed to adopt a report which has been drawn up for them by an executive committee.

That report deals fully with all the various suggestions which have been made for disposing of the present colossal statue of the Duke of Wellington. Various sites have been indicated as suitable for the reception of the statue, Chelsea Hospital, Wellington College, Portsmouth, a site in Hyde Park, and other places have each had their advocates.

The committee, however, after very careful consideration, have come to the conclusion that no other site offers the same advantages as that of Aldershot. On national and military grounds this appears to be the most appropriate position that could be chosen. At Aldershot the figure of the great Duke will be highly appreciated by the whole army, among whom it is most fitting that the statue should find a permanent home. The site selected is close to the headquarters of the general officer commanding, on an eminence overlooking the town and permanent barracks. It has been ascertained that the removal can be effected without difficulty and at small cost by the Royal Artillery.

It was at one time contemplated by the Government to invite a limited number of selected artists to compete for the new statue of the Duke, which it is proposed to set up in the open place near Apsley House. This idea of competition has been abandoned. It was found that the best sculptors would not compete, and that such a method would not result in the production of a work of art worthy of the subject and of the nation. Moreover, the present representative of the Duke of Wellington, to whose wishes and views in such a matter it was felt that the greatest deference was due, was entirely opposed to competition. It was therefore decided to entrust the execution of the new equestrian statue to Mr. Boehm, R.A., whose skill in modelling horses is unrivalled.

Those who would fain retain the present colossal statue have laid great stress on the argument that both man and horse are portraits from life. This argument, however, is refuted by the simple fact that the Committee have the authority of the present Duke of Wellington for saying that his illustrious father did not sit to Wyatt for the statue, and that the horse was modelled, not from Copenhagen, but from a thoroughbred named Recovery, three years after the death of the famous charger. Furthermore, the Duke is represented as he was supposed to have appeared at Waterloo; but the statue was not made until thirty years after, so that the sculptor had only the bust by Nollekens to guide him as to the likeness of the Duke in 1815. It deserves to be mentioned that these statements have been contradicted. The son of the sculptor says that the Duke did sit for the likeness. As to Copenhagen, Mr. Wyatt knew the horse well for years before its death. There are two paintings of Copenhagen in existence, the one by Lawrence, with the Duke mounted, in the possession of Lord Bathurst, the other the property of Lord Penrhyn. There exist, therefore, the same materials for a successful portraiture of the Duke and his charger which were available for Mr. Wyatt, and the Committee have confidence that Mr. Boehm will produce a work of art which shall be in every way worthy of his subject.

An Executive Committee has been appointed for the purpose of laying out the place, which is temporarily divided into triangles by the intersecting roads. Fountains and appropriate lamp standards will form the only decoration, as it is not proposed to introduce any other statue than that of the Duke of Wellington.

One work of great importance which it is desired to undertake in connection with these improvements is the completion of the arch as designed by Mr. Decimus Burton. The original drawings

and model of the arch, now in the possession of the Royal Institute of British Architects, who have kindly lent them to the Committee, show the treatment which the architect had intended to adopt. This includes an enrichment of bas-reliefs and sculpture surrounding the plinth which was destined to carry a quadriga.

Towards these works, which will involve a very considerable expenditure, the Government have promised to ask Parliament to contribute 6,000*l*., which is the price of the equestrian statue with a simple pedestal. The remainder it is proposed to raise by public subscription. A first list of subscribers will shortly be published, and in the meantime the Duke of Bedford and Sir Thomas Brassey have each announced their intention of contributing 1,000*l*.

### ST. GILES'S CATHEDRAL, EDINBURGH.

THE scaffolding was removed from the new west doorway of St. Giles's Cathedral on Saturday. In the niches above the arch is a series of statues representing famous Scottish kings, queens, and ecclesiastics, some of whose names are more or less intimately associated with the ancient pile. There are twelve statues in all, including six kings, two queens, and four churchmen—the royal personages occupying the six whole and two half upper niches, while the four lower ones are appropriated to the divines. Taking first the sovereigns, and beginning at the left hand of the upper line of niches, we have them in the following order:—(1) Alexander I., who erected, on the site of the present cathedral, the first church in Edinburgh certainly known to have been dedicated to St. Giles. He appears clad in mail and wearing the conical helmet with "nasal" peculiar to the period. (2) David I. is arrayed in graceful kingly attire, and holds a sceptre in his right hand and a book in his left. This monarch is understood to have materially forwarded the endowment and decoration of St. Giles's. (3) Alexander III. stands resting on a sword which is held by both hands, the countenance exhibiting the sternness and determination which characterised the hero of the battle of Largs. (4 and 5) figures of Queen Margaret, and Margaret, the consort of James IV., are disposed in the two half niches. (6) Robert I., the Bruce, is represented in the plate armour which began to be worn during the reign of the conqueror of Bannockburn; the right hand rests on the Bruce's favourite weapon, the battle-axe, while the left, holding a sceptre, is supported by a shield. (7) James I., the Poet-King, appears in the ermine of royalty, with a scroll held to the breast, and a happily-caught attitude of pensive meditation, suggestive of the author of "The King's Quhair." (8) James IV., displaying a banner held in the left hand, is encased in the seemingly impenetrable armour of the period. Passing to the ecclesiastics, in the lower row of niches, and commencing, as before, at the left, there are to be noted—(1) Gawin Douglas, the second Provost of St. Giles's, a massively disposed figure, effectively draped, standing in thoughtful attitude, and holding in his crossed hands the pencil and paper indicative of poetic pursuits. (2) John Knox, in the well-known Venetian gown, with beard hanging down on the chest, and hands demonstratively exhibiting an open Bible. (3) William Forbes, the first Episcopal Bishop of Edinburgh, in the attitude of benediction, supported by a crosier held in the left hand, and wearing the mitre and appropriate vestments. (4) Alexander Henderson, a champion of Presbyterianism against Prelacy, shown in loose-flowing robe, surmounted by a ruff encircling the neck, and holding a slightly-opened Bible in the right hand, as if in the act of argumentation. The whole work in connection with the doorway, with its elaborately enriched mouldings and gracefully foliated caps, its large panel in which is sculptured *Sanct Geill and his Hynde*, its smaller panels containing the Four Evangelists, and the niches and statues above described, forms a notable addition to the architectural features of the city. The design, by Messrs. Hay & Henderson, architects, has been executed by Mr. John Rhind, sculptor.

### IRISH ART.

THE annual meeting and drawing of prizes of the Art Union of Ireland took place in Dublin on Tuesday. Viscount Powerscourt, who presided, said he was glad that the members of the Royal Hibernian Academy had taken the wise step of opening their exhibition on Sundays at a low charge. This could not fail to do good by enabling classes which had far too few refining influences within their reach to avail themselves of the intellectual treat of examining the works of art there. He congratulated the academicians on becoming in this matter in advance of their brethren in London. He hoped that a succession of rainy Sundays would convince the Archbishop of Canterbury and others that it might be well to provide some intellectual public recreation under shelter from the weather as an alternative to the public-house. There were two matters connected with art in Ireland specially worthy of attention at the present time. The first was the recent completion of a very imposing monument in the shape of a statue or group of sculpture in their principal thoroughfare, dedicated to



a great Irishman, and remarkable as not having been assisted in any way from its inception to its completion by any patronage of the wealthy or distinguished in the land, but as being a spontaneous and lasting memento of a people's regard for the man who, by the efforts of his life and his example since his death, had done more than any one to secure the religious and civil rights of his countrymen, and to lay the firm and stable foundations of the liberties of the Irish people. Need he say that he referred to the noble statue of Daniel O'Connell? It worthily represented Ireland's greatest patriot, while it was the work of Ireland's greatest sculptor. The second matter to which he referred was still in an embryo state. The national museum and library were still in the future; but it was most satisfactory to know that the competitive selected designs were in a very forward state. It was matter of congratulation that the Irish architects who competed had come out of the struggle in such a way that a majority of the five selected designs belonged to them; and he might say without betraying confidence that the three or four designs of next rank were also by Irish architects, and were only not placed on account of some arrangements in which the first five were considered to excel, and not on account of any deficiency in artistic merit. He thought that, whichever design should be finally decided on, they would be sure to obtain for Dublin such structures as would fulfil every requirement. The late Lord Frederick Cavendish was one of the foremost promoters of the scheme. In the Royal Hibernian Academy's Exhibition of this year they had perhaps a better array of specimens of the best art of the sister country than they had ever had before. Sir Frederick Leighton had sent them one of his most important delineations of the human form, remarkable because studies of the nude on that scale were not so common in these islands as in France, where special prizes were offered for this class of subject. "Honi soit qui mal y pense." Then there were works of Millais, who had been called the modern Titian, which should be observed carefully. There was one thing to which, taking the ungrateful position of the "candid friend," he must allude. Painters made, perhaps, in their young days a certain number of very careful studies from nature, and these studies were full of merit. But they were often imbued with the idea that, once having gone to nature for their models, they were able to go on copying and reproducing these original studies over and over again, probably transposing and altering them to gain variety. But, unless the artist returned to nature, each succeeding reproduction became further and further from the truth, the painter's art degenerated into mere mannerism, and his pictures lost that stamp of the real which nothing but the faithful study of nature could give. He saw signs of this practice here, and he believed that it had been remarked the Irish school of painters could only become worthy to take a good place amongst the art schools of the world by the most rigid adherence to the recognised canons of art and by the closest fidelity to the works of nature. Let students of painting, as well as of sculpture, keep their most earnest attention fixed on the first and most important principles, and then, and then only, would success be sure to crown their efforts. Correct and faultless precision in drawing was the first essential; without that colour was but secondary. No artist had stood in the first rank whose drawing was not correct.

The Secretary read the twenty-fifth annual report of the Art Union, which stated that during the year 496 guinea tickets and 348 five-shilling, or single shares, had been sold. The committee had been able to allocate 460*l.* in prizes. During the year 354 new subscribers had been registered.

### SOCIETY OF CARPENTERS AND JOINERS.

THE twenty-fourth annual report of the Amalgamated Society of Carpenters and Joiners has been issued. It extends from December 1882 to December 1883. The general secretary expresses the pleasure he feels at the marked success which has attended the society's operations during the past year. Despite the continued depression of trade, 1883 will rank amongst the most successful years in the Society's history. During the year there have been opened twenty-two new branches—namely, nine in England, one in Ireland, three in Scotland, two in the United States, one in Canada, and six in Australia. The Brampton (Canada) branch forwarded no report for 1882, and has been struck out of the list of branches, leaving a net gain of twenty-one. The total number is 397, and they are distributed as follows:—322 in England, 18 in Ireland, 14 in Scotland, 17 in the United States, 5 in Canada, 8 in New Zealand, 11 in Australia, and 2 in South Africa. There have been admitted 3,847, and excluded 1,402 members, which, after allowing for deaths, &c., leaves an increase of 2,217, and a total strength of 22,837. This increase is quite exceptional, being larger than in any year except those of 1865 and 1866. The net income for the year was 54,639*l.* 14*s.* 8½*d.*, an increase of 5,076*l.* 6*s.* 1½*d.* on the previous year. The expenditure, 45,159*l.* 16*s.* 3*d.*, or 9,479*l.* 18*s.* 5½*d.* less than the income, thus increasing the cash balance by that amount, the greatest increase in any year since 1876. The usual careful valuation of

the building and other property of the society has been made, and the total is 61,617*l.* 18*s.* 11½*d.*, or 2*l.* 13*s.* 11½*d.* per member. Since the formation of the society, a period of twenty-four years, the average membership has been 11,088, and the total amount expended in the benefits enumerated above is 451,838*l.*, or 40*l.* 14*s.* 11½*d.* per member. There has been a rapid increase of the society in the United States and the British colonies. Four years ago they had only 726 members in these parts, which have now increased to 2,000. The number of members connected with the various branches in the north of England is as follows:—Barnsley, 46; Beverley, 21; Bradford, 152; Bridlington Quay, 15; Carlisle, 42; Darlington, 60; Dewsbury, 21; Doncaster, 65; Durham, 32; Gateshead-on-Tyne, 75; Goole, 7; Grimsby, 28; Halifax, 82; Hartlepool, 40; Harrogate, 10; Hebburn Quay, 87; Huddersfield, 64; Hull, 442; Ilkley, 7; Jarrow-on-Tyne, 124; Keighley, 17; Leeds, 248; Lancaster, 26; Leicester, 235; Liverpool, 476; Lincoln, 56; Manchester, 830; Middlesbrough, 126; Newcastle, 361; North Shields, 110; Nottingham, 676; Rochdale, 115; Scarborough, 130; Sheffield, 222; Shipley, 20; South Shields, 270; Sowerby Bridge, 20; Stockton-on-Tees, 101; Sunderland, 408; Wakefield, 30; Walker-on-Tyne, 157; West Hartlepool, 135; Whitby, 33; and York, 146.

### LABOURERS' DWELLINGS.\*

ONE of the most important points upon which correct information is essential before building workmen's dwellings, is that of the outlay which will be required. And here it may be stated positively, on the experience of many buildings erected during the last fifteen years, that there is no insurmountable financial difficulty. The rental received from the labourer will pay a fair percentage upon the outlay necessary to provide him with the amount of accommodation to which he is accustomed. The first cost of building labourers' dwellings in blocks in London may be taken at between 7*d.* and 8*d.* per cube foot for all expenses except land, and the cost per room, including share of staircase, laundry, sanitary arrangements, &c., would be a little under 60*l.* The rooms can be let at an average of 2*s.* 9*d.* per week. We have then the following estimate of outlay, and of annual receipts and expenditure per room. The first cost, exclusive of land, is, as above stated, 60*l.* The annual receipts will be 7*l.* 3*s.*, allowance being made for repairs and loss of rent by vacant rooms in the estimate for annual expenditure, which will consist of these five items:—

(1) Dividend on first outlay, at 5 per cent. . . . .	£3 0 0
(2) Rates, taxes, and insurance, 25 per cent. on net receipts . . . . .	1 10 9
(3) Collections at 5 per cent. on net receipts . . . . .	0 6 3
(4) Ground rent . . . . .	0 18 0
(5) Balance for repairs and loss of rent . . . . .	1 8 0
Total . . . . .	£7 3 0

The form of the building being necessarily a block, the grouping of the rooms, the access to them, and the sanitary and other arrangements have to be considered. While a certain number of single rooms are provided, it is by no means intended that families should continue to live in one room, unless absolutely compelled to do so by lack of means. Many are now living in one room that could and ought to occupy two or three. The rooms should therefore be so grouped together and connected by entrances that, while they are independent of each other and can be let singly to separate families, they can also, without any alteration, be let in pairs, or three or four together. When refining and civilising influences have been brought to bear upon them for a time, they often find that they can afford two. A certain proportion of two-roomed tenements should be provided. When the necessary height has been given to a room, the larger the floor space that can be secured, the better. If a room is to be 12 feet by 12 feet by 8 feet 6 inches, it is better to make the floor 12 feet by 12 feet than 12 feet by 8 feet 6 inches, the cubic content being the same in both cases.

The single-room tenement should contain a good and strong cooking-range, with oven, but without boiler, a coal locker so arranged as to serve for a seat, and a cupboard to contain food and crockery. In planning the room, a comfortable corner should be reserved for the bed, with which neither window, door, nor fireplace must interfere. A broad window-sill for window gardening is desirable, and the door of each single-room tenement should open to the external air to avoid the possibility of infection being conveyed from room to room. The balcony offers an advantageous mode of access to the one-room tenement, and should be reached by a broad, stone staircase, open to the air. The staircase is apt to present great difficulties in management, if not very carefully considered. One of the great objections to converting an ordinary house into a tenement house is, that the front door being left open at night to suit the late hours of some

\* From a paper by Mr. Elijah Hoole, architect, read at a meeting of the Society of Arts on April 2.



of the tenants, leaves the staircase accessible to tramps and others. They enter the passages and sleep on the stairs of these houses, and by their vile behaviour contribute greatly to degrade the inhabitants. If the staircase is of stone open to the air and rain, well lighted both by day and night, and overlooked by the superintendent's rooms, it cannot thus be misused. No other kind of staircase is admissible, and the fewer of these the better for cleaning and management, it being better to increase the size than the number. Outside the one-room tenement, and at a little distance from it on the same floor, or on the half-landing above or below, should be the pail service, where water can be drawn not from a cistern where it has been standing for days, but direct from the main. A sink stone in the floor will take any water spilt in drawing, and will also take the waste which it is important should be emptied away over a sink stone, and should pass through small perforations before entering the drain, so as to separate from it the flannels, soap, scrubbing-brushes, and other things left forgotten in the pail, and, sometimes when precautions are omitted, introduced with disastrous effect into the drain. The arrangements connected with the water supply and drainage are by far the most difficult to manage, and give more trouble than any other. This trouble is increased by the regulations of the water companies, whose waste-preventing arrangements are frequently waste-producers from their liability to get out of order. The screw-down valve is a fruitful source of waste, as people will not take the time and trouble to close it completely. For the common laundry, the use of a copper for part of a day each week is assigned to each tenant of a single room, who also has access to a drying ground, upon the flat roof of the block. Separate sanitary arrangements cannot be given to each single-room tenement, but are assigned to every two or three tenements, and are kept under lock and key. The simpler and stronger these arrangements are the better. Iron traps and iron pipes, jointed with red lead, are found to answer best. Lead is quite inadmissible, being easily damaged or stolen, besides being more costly. The drainage should be by glazed stoneware pipes, laid in straight lines and with good fall, manholes being substituted for bends and junctions, and ample means of examination and clearing being provided. Thorough ventilation of the drains and their complete isolation from the sewer is, of course, essential. A large dust-shoot, with an opening on each floor, should receive the ashes and refuse. Ventilating appliances must be provided to each room, and should be out of sight, or they will certainly be stuffed up and closed. An inlet for fresh air, without draught, can often be made over the architrave of the door. A small slot-hole, cut in the meeting-rails of the window-sashes, is inexpensive and very useful, as it gives an upward current of air without draught, and imperceptibly changes the air of the room. It is also not easy to close up.

Repairs require a large expenditure when old tenement houses have to be maintained and managed. This arises from two causes: one that the labourer and his family are not very careful of their dwelling, the other that old tenement houses are often all but falling to pieces. The labourer is rough and strong, and requires surroundings not easily damaged. He usually knows good work when he sees it, and he despises, and is, therefore, not careful of the miserable building in which he is compelled to live. Besides this, the materials, even if good, and the mode of construction of an ordinary dwelling-house, even before it has become so old as to have descended to the condition of a tenement house, are unsuitable in the highest degree. For instance, instead of the rooms being enclosed by brick walls able to resist a considerable amount of wear and tear without injury, the rooms in which the labourer and his family are usually lodged are enclosed with lath and plaster. This, when new, is very tender and easily damaged, but when in the state in which we usually find it, having lost its precarious hold upon the slight laths, it is only held together by the layers of paper with which the walls are covered. The least touch causes this plaster to fall, and when once a hole is broken into it, the damage spreads with great rapidity, and in repairing it, it is difficult to know where to stop. Not only are the walls and ceiling in a condition very liable to damage, even when most carefully used, but the floor is usually worn so very thin in places that the legs of the furniture, and even the feet of the family, unexpectedly break through. Every other part of the room, the door, the window, and the fireplace, has long ago been worn out, and should have been replaced. Gradually all parts of the building, except the foundations and the lower parts of the wall, have to be renewed. This process of rebuilding, bit by bit, is misnamed repair, and is supposed to be due to the destructiveness of the labourer. The fact is that the labourer is compelled, by necessity, to live in a house which is in such a state of decay that every other tenant has left it. His house is dilapidated, not because he has destroyed it, but because he cannot find a house to live in which is not in a state of dilapidation, and cannot compel his landlord to repair it. Vigorous action on the part of the sanitary authorities might easily prevent this. They have hitherto been far too chary in condemning premises unfit for human habitation.

**A Conservative Club** is to be erected in Rochester, on the site of the old Theatre Royal.



#### The Fire at Hope Hospital, Salford.

SIR,—I am requested by the committee of the Salford Union Infirmary to forward to you, for the information of the public, an explanation of certain matters incidental to the serious fire which occurred on Saturday.

At a special meeting held yesterday the committee, after previous individual and personal inspection of what remains of "Pavilion B," conferred with Mr. Willis, the superintendent of the Salford Fire Brigade, and myself, as to the immediate cause of the misfortune.

Mr. Willis had made an independent investigation before we met, and we had both arrived at the same conclusion.

The roof of the pavilion having been completely destroyed, the walls and chimney-stacks are left absolutely bare, and in a condition most favourable to a critical examination.

No timber of any kind has been built in or into the flues or fireplaces; but, on the contrary, there is abundant evidence of the extreme care that has been exercised to avoid such dangerous construction by the introduction of cast-iron brackets built into the walls of the flues, and backed up with brickwork, to carry such timbers as would otherwise have had to be built into the walls, and thus have their ends exposed to the action of the heat or fire inseparable from the interior of a smoke-flue.

Those iron brackets still remain intact in their original position; and in other portions of the building, which before the fire were screened from observation by the plastered ceilings, the brick corbelling from the chimney-stacks, specially prepared to receive purlins and other timbers which would otherwise have had to go into the walls of the chimneys for their necessary support, are evidence of the careful manner in which it has been sought to avoid the possibility of ignition.

The "structural defect" which caused the fire is the result of imperfect workmanship on the part of some individual bricksetter, who has left a small aperture in the wall surrounding and forming the flue from the fireplace, in the ward situate between that on the ground-floor level and that on the top storey.

A fire in that particular chimney flue, the origin of which is unknown, but which probably consisted of burning soot, supplied all else that was wanting; and both Mr. Willis and myself are of opinion, after our observations and inquiries, that it had been making progress in the roof for some considerable time before it was observed by the inmates.

It is both curious and illustrative of the saying "nothing occurs but the unexpected," that such an aperture *could* exist only in a space of less than 6 inches in the height of the wall without its being open to permanent observation either from the inside of the ward itself—the walls of which are not plastered—or to external observation as a part of the outside chimney-stack, in which latter position it might have remained for a long time as a harmless ingredient in a defective flue.

It is not suggested that the builders or their subcontractors were interested in causing such a simple but serious neglect of ordinary care. The total cost of making a "perfect job," including materials and labour, would have been met by an additional outlay of less than a penny.

Builders and their foremen, clerks of works, and architects especially, are at the mercy, in numerous details, of the most ill-conditioned workman who can handle a trowel.

After theories of construction have been anxiously thought out, and have been provided and explained for his guidance, aided by active and efficient supervision, the building operative must necessarily have some personal responsibility delegated to him.

In this particular instance there was nothing to be done that was in any way exceptional. The aperture, from its peculiar position, would probably be very soon screened by other work from the observation of the several foremen and the clerk of works, the latter of whom was constantly engaged in superintending the building operations; and it is but fair to them to observe that in a structure of more than a mile in circumference, other matters might be considered as more in need of their attention than preventing a bricklayer from leaving a flue with a hole in the side of it communicating directly with the interior of the roof.

It is of course impossible to identify the culprit amongst the numerous artisans who were engaged on the works, but if this communication should come under his observation or that of his fellow-workmen, it is hoped that the fact of the fearful jeopardy in which the lives of many of their less fortunate fellow-creatures have been placed by one act of uninspired carelessness, may have the effect of making them realise a keener sense of the responsibility they assume for the faithful discharge of their duties, not only to their employers, but to the community.

The results of such a serious conflagration in the centre of a large institution have demonstrated the wisdom of adopting the pavilion principle in its construction, supplemented by fire-proof corridors, gangways, and staircases.



It ought to be mentioned, in correction of sundry reports, that there was no panic among the patients. On the contrary, their behaviour was most commendable.

The calm, systematic, and energetic conduct of the several officials and others was warmly recognised at the meeting of the committee yesterday.

No "old woman has died of fright," and the one feature in this unfortunate occurrence on which all persons are to be congratulated, is the fact that it has not resulted in a single accident to life or limb.

28 Faulkner Street, Manchester :  
April 1, 1884.

Yours faithfully,  
L. BOOTH, Architect.

## LEGAL.

**Court of Appeal.—March 31.**

(Before the MASTER OF THE ROLLS and Lords Justices  
BAGGALLAY and LINDLEY.)

WHALLEY v. LANCASHIRE AND YORKSHIRE RAILWAY COMPANY.

This was an appeal on the part of the defendants. In August 1881 there was an unexampled downpour of rain, which reached such a height as to threaten the existence of the embankment of the defendants' railway between Liverpool and Southport, and in order to save it the company's servants cut openings in the embankment, thus letting the water escape on to the land owned by the plaintiff, Mr. Whalley. Mr. Justice Day gave judgment for the plaintiff. From this decision the defendants now appealed.

The Master of the Rolls, in giving judgment, said that the defendants were the owners of a railway standing upon an embankment, and they had been authorised by their Act of Parliament to exercise all the rights of a railway company. The embankment in question stood upon sloping ground, one portion of the land being higher than the other. An extraordinary storm of water arose by which the length of the upper side of the embankment was flooded, and the body of water rested in force against the embankment. In order to secure the safety of the embankment, the servants of the owners of the embankment cut drains or trenches throughout it, and by reason of this the water passed through the openings on the plaintiff's land, doing it damage. The question was whether the defendants were liable for the damage caused to plaintiff's land through the water passing on to it sooner than by percolation it otherwise would. The jury found that more damage had been done than if the water had been allowed to percolate through; but the jury also found that what the defendants did was reasonable for the preservation of their property; and the question arose whether under the extraordinary circumstances the defendants were liable. Were they bound to take active steps in order to save their own property, the necessary effect of which was to injure the property of their neighbours? In doing something to cure the material defect of a main land he had no right to transfer that defect to his neighbour. If he did so, he must pay for it; and in this case the defendants could not plead the ordinary use of their railway, as then sparks from their engines might set fire to a person's property near their railway. He therefore thought that the defendant company was liable in this case, and that the judgment of Mr. Justice Day for the plaintiff ought to be upheld, and the appeal dismissed with costs.

Lords Justices Baggallay and Lindley concurred.

## CHURCH BUILDING AND RESTORATION.

**Perth.**—The memorial-stone of a new church, being erected in Marshall Place, Perth, for Free St. Leonard's, has been laid. The style of the church is the later Scottish Gothic, founded on old examples. The length of the church will be about 70 feet, and accommodation will be provided for about 1,000 sitters. The church is built of Polmaise stone, and is expected to cost fully 11,000*l.* The architect is Mr. J. J. Stevenson, London.

**Morpeth.**—A Wesleyan chapel, erected in Manchester Street, has been opened. The building occupies the site of the former chapel and of a caretaker's house which adjoined it. The ground slopes rapidly from front to back, and advantage has been taken of this to obtain a school-room 36 feet by 23 feet, together with a large vestry and class room. The chapel is seated for 360 persons. The contractor for the work was Mr. D. M. Spence, Amble, and the architects were Messrs. S. Oswald & Son, Newcastle-on-Tyne.

**Aldham.**—The church of Aldham has been lately restored, the previous state of the building being very rotten and dangerous. Among the work carried out the south wall has been entirely taken down, the old foundations dug out, new foundations laid, and the wall rebuilt. The north wall has been repaired, those portions which were found to be rotten having been removed and replaced by new work. A handsome chancel arch, with north and south

buttresses, has been erected. The stonework of the windows on the south side of the nave is new, as also the stonework of the south doorway. The north windows have been thoroughly repaired, and fitted with new lead-work and glass. Nearly two-thirds of the tower have been taken down and rebuilt, and the tower is now surmounted by a spire. The restoration has been carried out by Mr. W. Everett, builder, of Hadleigh, under the direction of Mr. W. M. Fawcett, F.S.A., of Cambridge, diocesan surveyor. The porch is to be built forthwith, and windows and louvres put in the tower.

## SCHOOL BUILDINGS.

**Earlestown.**—A lecture-hall and Sunday-schools are about to be built in connection with the Primitive Methodist Chapel, Earlestown, near Warrington. The buildings will comprise a hall capable of seating 500 adult persons, five class-rooms for 20 scholars each, an infants' room for 60 infants, and a library. Separate yards and offices will be provided for boys and girls respectively. The plans have been prepared by Messrs. Maxwell, Tuke & Hurst, architects, Southport, and the works will be carried out under their superintendence.

**Great Broughton.**—The memorial-stone of a Wesleyan chapel has been laid. The style chosen is Gothic, and the materials are Brigham white stone with hewn work of Aspatria red stone. A Sunday-school at the side, and attached, forms part of the building, and is of the same style of architecture. There are also two vestries, and the whole is to be heated by Grundy's heating apparatus. The architects are Messrs. C. Eaglesfield & Son, Maryport, and the contractors are as follows:—Masonry, Mr. A. Mackenzie, Maryport; joiner-work, Mr. P. Robinson, Cockermouth; and slating, plumbing, and glazing, Mr. T. Mandale, Maryport.

## GENERAL.

**Lord Carnarvon**, at the request and on behalf of the Prince of Wales, will perform the ceremony of laying the foundation-stone of Peterborough Cathedral, assisted by Lord Lathom.

**Mr. T. S. Worthington** read a paper on "Decoration" at the meeting of the York Arts Guild on Thursday in last week.

**The Exhibition at Bradford**, opened by the Prince of Wales last year, in connection with the Technical School, has resulted in a net profit of nearly 7,000*l.*

**The Bay** of the Bishop's Cloister at Hereford Cathedral nearest the grave of the Hon. Mrs. Herbert, wife of the dean, is to be restored under the direction of Mr. J. O. Scott, as a memorial of that lady.

**A Design** by Messrs. Heaton, Butler & Bayne has been adopted for the stained glass window which is to be erected in Northampton, as a memorial of Mr. Peirce.

**The Bradford Technical College** has cost 29,880*l.* As the annual expenditure is about 4,100*l.*, it is expected that for the next two or three years there will be a deficiency of about 1,000*l.* in the income.

**Messrs. Oliver & Leeson**, of Newcastle-on-Tyne, have obtained the first place in the competition for the new church at Wallsend. Mr. Pearson, R.A., was assessor. It is expected that the works will be shortly commenced.

**Messrs. Nelson & Brooking**, architects, of Barnet, have dissolved partnership.

**Mr. H. Marsden**, of Louth, has been appointed surveyor to the Commissioners of Sewers for the Wapentakes of Louth Esk and Ludboro', in place of Mr. J. Maughan, resigned.

**The Liverpool Cathedral Committee**, on Tuesday, decided by 41 votes to 30 that the site of the new cathedral shall be on St. John's Churchyard.

**Mr. A. Carnegie**, of New York, has given a further sum of 1,000*l.* for the erection of a gallery in the Carnegie Baths, Dunfermline.

**Messrs. Craven, Dunnill & Co., Limited**, Jackfield Works, near Ironbridge, Shropshire, have been awarded at the Calcutta Exhibition two medals and two certificates, for the excellence of their productions in enamelled, encaustic, and decorative artistic tiles.

**The Pulsometer Engineering Company, Limited**, Nine Elms Ironworks, have, in addition to two other awards, received a gold medal at Calcutta for their patent direct-acting Deane pump.

**The Masonry Work** of the railway bridge over the Save, between Belgrade and Semlin, is nearly completed. The work of raising the embankment between the banks of the Save and the railway station has been begun. In January last the Government paid to the company 2,137,669 frs. for work done.



# SUPPLEMENT

TO THE

# ARCHITECT

LONDON, APRIL 5, 1884.

## THE BUILDING TRADES EXHIBITION AT THE AGRICULTURAL HALL.



CLARKE. The exhibition closes this evening at ten o'clock.

### Messrs. Hodgkinson & Clarke.

The home educational seat and desk, one of the arrivals in question, is not only ingeniously constructed, but all the harsh lines and stern-looking features that cling to the old school-desk are eradicated, and the appliance is made attractive to the child instead of, so to speak, repulsive. Every mother will, we are sure, be charmed with it. Its main advantages are that it can be made to suit children varying from six to sixteen years by a simple arrangement that enables seat or desk to be raised or lowered, and drawn apart to make more room between the two. Thus one of these seats purchased for a child when young is suitable for it as long as it receives its tuition at home. But its hygienic features are more important than its economical points, and we find that it has been formed in shape to prevent the risk of curvature of the spine, compression of the chest and high shoulders, and will, we have not the slightest fear, be recommended by every medical man who sees it. The school partition, of which we have already spoken, though at the time it was not properly fixed, improves materially upon full acquaintance, and must prove a most useful feature to the hard-worked teacher. Whoever has designed these appliances have well thought out their subject.

### Messrs. Jeffrey & Co.

Messrs. JEFFREY & Co. have contributed a very fine set of specimens of interior decoration in non-arsenical wall-papers, which include both hand and machine-printed wall-papers, dado decorations, embossed leather papers (if such a term is admissible), flock papers, lacquered gold papers, and staircase decorations. Occupying the central portion of a large and lofty stand we have an Italian damask design by Mr. W. SCOTT MORTON. It is worked in different shades of flocks on a lacquered gold ground, and is adapted for large rooms when a rich effect is desired. Another specimen of this design is shown in blues, on a "talc" ground, giving it the appearance of a rich silk, and is of a *recherché* character. The "Rossetti" pattern, in tones of yellow, designed by Mr. J. D. SEDDING, will, no doubt, be admired by many. It is an exceptionally wide pattern, measuring 26 inches by 34 inches, and can be hung so that the pattern shall not repeat in lines. One of the gems of the display is, in our opinion, the "tapestry" pattern in blue and gold, having all the effect of a piece of the real material. Above these patterns, and forming a frieze, is a fine example of an embossed leather paper representing the "poppy," the design being stamped in high relief, and the flowers and leaves hand-painted. On the right-hand screen we find the "hydranga," very naturally treated in rich reds

and browns, making a warm luxurious-looking covering, and adjoining it is a filling and frieze by Mr. W. J. MUCKLEY, an attractive work, the design of the former being orange-blossom and fruit, while the frieze represents doves, owls, and foliage, with a background in gold. This has been especially designed with a view to obviate the constant repetition of the same objects in this kind of decoration. Close to this is a pretty feature from the pencil of Miss KATE FAULKNER, with a dado of iris and poppies. The left-hand corner contains a fine pattern printed in reds on a talc ground; also an example of printing in green transparent colours on a metal ground; and next to it a decoration of Italian character in flocks and lacquered gold—a rich work; and adjoining this is another rich example, a drawing-room filling in blue and gold, with a full-length of the frieze, 21 inches deep. The outside of the stand contains, amongst other specimens, a classic decoration for staircases, specially designed by Mr. OWEN W. DAVIS, particularly adapted for large staircases or public buildings, the main features being that a scroll dado can be used without the necessity of mitreing, ornamental stops being placed at the junctions. In contradistinction to this *chef-d'œuvre* is an example of a cheap machine-printed staircase decoration giving a stencilled effect. The average cost of this, we are told, would not exceed  $2\frac{1}{2}d.$  per yard, and it has an excellent effect. The remaining portions of the exhibit are chiefly composed of low-priced machine-printed papers, all, however, possessing artistic feeling in colour and design. The firm have in addition a stand in the south gallery, where other meritorious decorations are to be seen, clearly showing that need no longer exists for covering our walls with poisonous colours either in inexpensive or the most costly decorations.

### Mr. P. A. Maignen.

Mr. P. A. MAIGNEN, 22 and 23 Great Tower Street, is present with his celebrated "Filtre Rapide," which has become one of the most popular filters manufactured, and in a short space of time. Medical authorities and sanitarians generally will not give countenance to any appliance for filtering water for domestic purposes that does not take to pieces, or that the user has not complete control in connection with its working parts for the purpose of cleansing; and the more simple the arrangements, the more support it is sure to obtain. Mr. MAIGNEN has secured all these advantages, and has at the same time introduced some novel features into his invention. The filtering medium, a combination of different charcoals, is thrown into the water to be filtered, and this is drawn with the water itself to that part of the filter through which it has to pass to the filtered-water reservoir. This consists of an earthen perforated cone, covered with a cap of asbestos cloth, and to this material the whole of the charcoal clings or is deposited, forming a solid body of some thickness over its entire area. Arrangements are also made for aerating the water, by supplying it with a constant accession of purified fresh air. For water that is very hard, or that requires softening, Mr. MAIGNEN has patented a "media," called *carbo calcis*, that purifies and softens at the same time. Besides independent filters, Mr. MAIGNEN arranges his system to filter the entire house supply from the tank, and he is prepared to arrange with water companies to filter the whole of their consumption at a much less cost and to render it perfectly pure. These filters are also made in a form to suit armies on the march, and is, we believe, the only one now approved by the War Office, and was sent by the Government to the Soudan for the recent campaign.

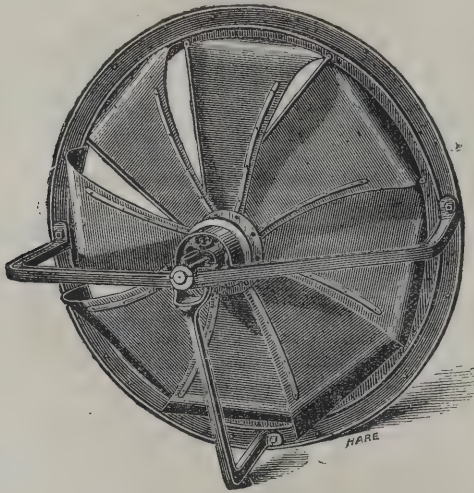


**Messrs. Geo. Waller & Co.**

Messrs. GEO. WALLER & CO., of Holland Street and Bear Gardens, Southwark, occupy Bay 17 with a full collection of their many specialities. Penstocks, it may be presumed, are made a leading feature of, the firm having for more than forty years devoted considerable attention to them, and they claim to have the largest stock of patterns in the world of various sections ready for use. They are shown in various forms, as well as the many appliances connected with sewer requirements. There are tide-flaps and valves, flushing-valves and boxes, flood-water ventilators, stink-traps, pavement-doors and frames, and foot-irons, &c., &c., all of which the profession is fully acquainted with. The only new article to which our attention was called is a side-entrance cover for sewers, that is a decided improvement over existing arrangements. The door is formed of a double grating, the bars of the one fitting closely into the other, and on the outer or top one being raised, the inner one is lowered, offering direct access to the sewer. On entering, the workman pushes up the under one, this action bringing down the top one, which forms the perfect lid and renders the presence of an attendant in the street unnecessary. As a saving of labour this invention should commend itself to authorities.

**The Blackman Air-propeller Company.**

The Blackman Air-propeller, shown by the BLACKMAN AIR-PROPELLER COMPANY, Limited, 57 Fore Street, E.C., is attracting considerable attention. Formed as a fan with blades of peculiar shape, as our illustration shows, it can be fixed either



vertically or horizontally. According to the side that is uppermost or outward, so it extracts vitiated air or introduces fresh. As a means of propelling large bodies of air in either direction it is probably without a rival, and, according to the speed at which it is driven, so is that quantity increased or diminished. The amount of power required is very small, and would make no perceptible difference in any motor whatever work it may be doing. For mills, factories, or public buildings where a large body of people are at work or congregated, it offers the quickest means of changing the atmosphere of any appliance we are acquainted with.

**Messrs. Verity Brothers.**

In the matters of window openers, reversible sashes, casement stays, and kindred appliances, Messrs. VERITY BROTHERS, Call Lane, Leeds, deserve notice. The reversible sashes enable both top and bottom ones to be swung by means of strong swinging pivots. The top one can be opened to any required distance for ventilation by the assistance of a chain opener and fastener, and it remains secure in whatever position it is left, and for the ordinary sliding movement of the sashes a double or treble-lock fastener is provided. The chain opener and fastener is also applied to ordinary fanlights, and the *modus operandi* can be applied to windows of the heaviest calibre, and is at the same time simple and free from objectionable accessories. These appliances occupy a large portion of the exhibit. The patent casement stays for French or casement windows are of good and simple construction, rendering the opening of windows easy, and securely setting them in any desired position. There is also a wall and ceiling board cramp possessing some good points, and effecting a saving of time and labour in use.

**The Bower-Barff Rustless Iron Company.**

THE BOWER-BARFF RUSTLESS IRON COMPANY, Limited, 23 Queen Victoria Street, E.C., again exhibit a variety of specimens of ironwork, embracing a wide area as regards their uses, coated by their patent process. The object is of course to show the applicability of the system to any and everything made of iron, either cast or wrought. The advantages of the BARFF process has been so often dilated upon in the columns of *The Architect* that little remains to be said. A notable feature in the process, that possibly we may not have mentioned before, is the colour produced upon articles treated by it. Although the same in all cases, it is none the more effective in the case of ornamental work, which assumes the appearance of a dead black, similar to those coated with a Berlin black of the same shade, from which it can scarcely be distinguished.

**Messrs. Bellman & Ivey.**

Messrs. BELLMAN & IVEY, 95 Wigmore Street, W., on this occasion confined their exhibit to BELLMAN's patent stoneware gully, which was fully described in *The Architect* of August 26, 1882. As we observed on that occasion, the gully receives the rain-water directly from the roof, avoids all splashing, ventilates pipes and trap, and renders clearing a very easy matter. Since their introduction a large number have been sold, and the firm have appointed agents in various parts of the country where they can be seen and ordered. But we miss the collection of decorative substances that on previous occasions has rendered the exhibit of Messrs. BELLMAN & IVEY so attractive.

**Messrs. John G. Rollins & Co.**

An exhibit of a mixed but useful and interesting character is contributed by Messrs. JOHN G. ROLLINS & Co., Limited, Old Swan Wharf, Upper Thames Street, a firm of considerable reputation in connection with American industries. The carpenter, the householder, the agriculturist, and the hardware dealer will find plenty to interest them on this stand, and everything shown is of American manufacture and by the most popular makers. In tools we find a collection of wrenches, axes with hickory handles, cast-steel hatchets of various patterns, cast-steel hammers, a set of cross-cut saws for two men by the noted firm of "DISSTON" of Philadelphia, a similar set for one man, and a selection of cast-steel hand saws of various kinds and qualities. For the agriculturist there are a large collection of cast-steel hay, manure, and spading forks, many of these emanating from the celebrated firm of "BATCHELLER"; of American hand hay-rakes, cast-steel scythes, and scythe swaths. In the domestic department we find a number of those *bric-à-bracs* our Transatlantic friends have yclept "notions." There are butter-churns, clothes-wringers, fluting-machines, folding tables and chairs, blind furniture, &c., garden tools, and the popular archimedean lawn-mower, for which a most extensive sale has accrued in England. We shall not attempt to enter into a criticism of American *versus* English tools, as it is a subject that has been amply discussed elsewhere; all we shall remark is, that in selecting makers who stand at the head of their various industries in the States, Messrs. ROLLINS introduce us to the best class of American manufactured goods. That many of them have an extensive sale here as well as in our own colonies, sales that are repeated year by year, is the best reply that can be given to any that doubt their quality, and so far as finish and general appearance go they seem to leave little room for objection. Besides the goods we have mentioned, there are some ingenious specimens of baby carriages, made by the American Baby Carriage Company.

**The Patent Victoria Stone Company.**

THE PATENT VICTORIA STONE COMPANY, 283A Kingsland Road, are showing this concrete material in its varied applications for building purposes, paving, &c. The attention we have before now drawn to it, and the practical tests it has been put to, leave but little room for us to say more in its favour. Its merits, too, from an economical standpoint, are also of no mean order, for the saving of time in laying paving, platforms, &c., in slabs of this material instead of natural stone is very great, while its cost is also much less than the latter. For architectural dressings it is also now very extensively used, and likely to be so, as long as it is turned out in such a praiseworthy manner as are the vases, pedestals, pilaster bases, steps, window-heads, &c., now being shown at the Company's stand.



**Messrs. Wm. Udal & Co.**

Messrs. WM. UDAL & Co., the old-established brass-founders of Bromsgrove Street, Birmingham, and Charter-House Street, London, have an excellent collection of builders' and cabinet brassfoundry, both cast and stamped, ship, window, and stable fittings, and an array of cabinet handles in Mediæval, Queen Anne, Chippendale, and other styles. The collection of door furniture is of an exhaustive character, the designs embodying all those now in vogue, and made in wood, china, enamel, brass, and glass. Fire-dogs and brasses of artistic merit also form a conspicuous feature in the exhibit. In addition to these there is one article that attracts considerable attention. This is BRUCE's patent fanlight opener, of which the firm are patentees and manufacturers. Substantially made in brass, it is a simple and effective apparatus, actuated entirely by levers, one determining the movement of the whole, and the window can be lifted at any angle by simply turning a thumb-screw. It is adapted to any kind of light, including ship ports, or for opening and closing doors, and it can be also arranged to open any number of lights at the same time that may be moving in opposite directions. It can also be adapted to dome top fanlights, the only additional means here used being a cogged quadrant and rack. They are made in different sizes according to the size and weight of the work to be effected, and the working space only requires from 1 to 1½ inches to move in, and it would be difficult to say too much in its favour.

**Messrs. Salmon, Barnes & Co.**

Messrs. SALMON, BARNES & Co., The Canal Head Foundry and Engineering Works, Ulverston, confine their exhibit as last year to two specimens of their revolving shutters, hand-power lift, and their patent bench knives. One of the examples of shutters is actuated by their patent balance weight motion, which is specially adapted for heavy shutters, the moving being so much more easily effected, and the mechanism so simple that nothing is employed that can easily be put out of order. For those who prefer the spring motion, a curvilinear shutter is shown, worked by their improved action. The hand-lift exhibited is made on the patented principle adopted by the firm. It is of simple construction, the lifting and lowering being performed by an endless rope, without a hand-brake. Toothed wheels in the gearing are altogether dispensed with, and the brake is always in gear, that is to say, to whatever point the cage is drawn to there it remains, if the rope is let go, and the heavier the load the greater the grip upon the gearing. The cage rope wheel is turned, and of large diameter, to prevent the fraying of the rope. For facility of fixing and general advantages, the lifts made upon this principle are doubtless worthy of taking rank amongst the very best in the market. It is almost needless to add that the firm manufacture them for all purposes, and to work by steam-power and hydraulics as well as by hand.

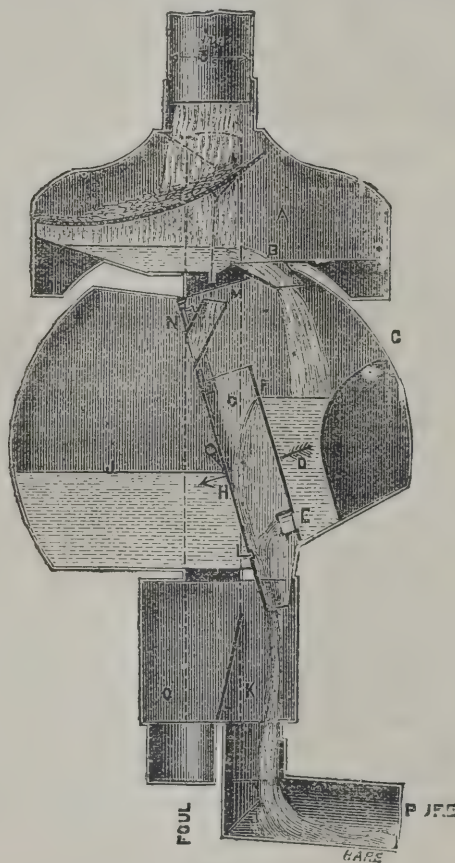
**Messrs. Ewart & Son.**

One of the most attractive exhibits in the building is that of Messrs. EWART & SON, 346 Euston Road, N.W. A somewhat massive structure, covered entirely with zinc, introduce us to the many uses to which this useful metal is applied. We see it here in its simplest and most elaborate form, as adapted to decoration and many of the domestic articles into which it is wrought. But it is in its application to building purposes that our readers will feel the greatest interest. There are bold and handsome dormers, finials, mouldings, crestings, ornaments for curbs, mansard roofs, &c. The roofing intended to take the place of our slates and tiles is a "new departure" to English notions. We well know that in America metallic tiles are largely used, and attempts have been made to introduce them here, at present with but scant success, but these tiles are mostly made of tin, though well protected with metallic paints, and their advantages as to weight, ease of laying, &c., have been often urged. On the other hand, it has been said that the sulphurous acids always present in the atmosphere of our large towns would have an injurious effect upon them, even with the protection named. We have not decided the question yet, but we are using zinc roofing for turrets and other ornamental additions to many of our best mansions, so far apparently with success. Should a more lengthened experience assert advantages in metallic roofing over that of the more cumbersome tile or slate, a revolution will be created in two im-

portant industries that at the present moment has scarcely been taken into serious consideration by the makers of the orthodox appliances.

**Mr. Charles Gay Roberts.**

The rain-water separators, exhibited by Mr. CHARLES GAY ROBERTS, of Haslemere, Surrey, and which have been improved and made in other forms since their first appearance, are ingenious contrivances, and well worthy the attention of both town and country residents. They occupy but little space, are fixed on the wall of the house in connection with the overflow pipes from the roof, and are made to suit either a country or town house. When we consider the quantity of rain-water that is annually allowed to run to waste, the question arises, Is this a necessity, and could not more of it be utilised for domestic purposes than is now the case? The system adopted in many districts of catching the rain-water in a tank and using it for washing, &c., is objectionable, because it contains all the impurities that are collected on the house-tops and gutters, making it often extremely offensive; but with an appliance that collects only the purer portion of it, all objections cease, and it becomes at once available for all domestic purposes, even (after filtration) for drinking, and in many country districts in particular this would be considered a great



boon, clean rain-water when filtered being preferred by many persons to spring-water. Simply told, the separator is a comparatively small tank with two compartments, one of which is made to cant over at a given time. When a storm first arises the rain washes the roof and gutters of all dirt and other matter that may have collected, and by the arrangement of the separator all this impure water passes in the usual manner to the drain, but after a time, sufficient to have allowed the impurities to pass away, the water in the first compartment rises and flows into the second through two small holes; but to make assurance doubly sure, in other words, to give every facility for the slightest impurity to escape, a portion of the water also passes away through a hole in the bottom. In time, however, the water preponderates and the second compartment fills, and on reaching a certain level, this cants over, and by means of a discharge-pipe empties itself into the storage tank. There are other features in connection with the continued action of this appliance under varying conditions of storm that can be best understood by an examination of the separator, or by consulting the illustrated prospectus of the patentee; but enough has been said to show that the invention is of a most useful character.



**Messrs. J. L. Bacon & Co.**

Messrs. J. L. BACON & Co., of 34 Upper Gloucester Place, W., and at Glasgow, Dublin, and Belfast, show their system of heating and ventilating, and also a variety of cast-iron ornamental coil cases and floor and skirting gratings. Many of these are of very elegant design, and can be obtained solely from this firm. But it is their system of heating that we would specially draw attention to, and in doing so must first mention that Messrs. BACON & Co. are well known as having originally introduced a tube of superior quality, and of a small and particular diameter for this purpose. Amongst the advantages of the apparatus are that it is equally applicable to old or new constructions, and from the facility with which the tubes can be bent can be introduced without disturbance to existing arrangements. The action of the apparatus being that of the simple circulation of liquid induced by lighting the furnace fire, all the difficulties arising from condensation, air stoppage, and the consequent necessity for attention to valves and air-cocks are avoided. The whole apparatus when erected is tested by hydraulic means to a pressure of 130 atmospheres, and since the valve is regulated to blow off at six atmospheres, it is manifest that leaks are of rare occurrence. The inconvenience of maintaining fires during excessive cold, to prevent the water in the pipes from freezing, has now been overcome, by mixing with the water a patent non-freezing solution, which, once in the tubes, serves for an indefinite period, as it neither decomposes, precipitates, nor evaporates under the action either of heat or cold.

**The Albion Concrete Company.**

Mr. CHARLES LUMLEY, manager of the ALBION CONCRETE COMPANY, of Haymerle Road, Peckham, S.E., who appeared for the first time at last year's exhibition, is again present. Then the stand was in the arcade; this year it occupies a more prominent, or, at least a more attractive, position at Bay 4 inside the hall; and the reappearance of the Company confirms the opinion we expressed upon referring to their exhibit on that occasion. The articles shown comprise various specimens of string-courses, cornices, columns, and architectural concrete dressings in general, both in buff and red. All the work is exceptionally well turned out; the aris is so sharp and clean, and the section of the mouldings so uniform, that the ordinary observer would fail to detect the difference between it and well-cut natural stone. This is the more noteworthy from the fact that none of it has been got up merely for show, but is all on order for different buildings, and is on the way to its respective destinations. Of the buff colour, a portion of the dressings for Mill's Hotel, St. George's Road—C. H. FLACK, Esq., being the architect—consisting of a very effective and bold design of a bay window, calls for special attention. Of the buildings for which they have the red colour on hand may be mentioned Madame TUSSAUD's new galleries in the Marylebone Road—F. W. HUNT, Esq., architect; Messrs. LEIGHTON BROTHERS' new premises, Drury Lane—Messrs. LAUDER & BEDELLS, architects; and business premises in the Walworth Road, also by Messrs. LAUDER & BEDELLS.

**Mr. S. Ransom.**

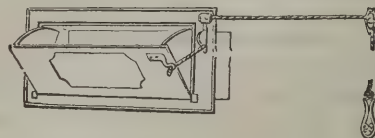
Mr. S. RANSOM, Epoch Saw Mills, Kensal Road, W., staircase and hand-rail manufacturer, is showing at Stand 277 specimens of his craft that are worth particular notice, and do him great credit. The exhibit comprises a very varied collection of hand-rails, carved scrolls, newels, and balusters in oak, mahogany, walnut, and pitch pine, the designs of which are very effective, and the workmanship all that can be desired. The principal portion of the stand is taken up with two full-sized flights of stairs leading to one landing, the sections of which are executed in different styles. One of these in oak, with ornamental bracketed string and bold curtail steps, is very effective; and above, the moulded mahogany hand-rail, terminating with carved scroll, displays some choice work and richly-grained wood, and the turned mahogany newel supporting it is of equal merit. Another that struck us as being very unique is a dogleg in pitch pine, with bold curved steps, and the variously-designed newels are panelled with different woods; the hand-rails are in oak and walnut, as also are the balusters, and the patterns of the latter are original and striking. Two well-designed models of complete staircases, the one a dogleg, the other a spiral, complete this interesting exhibit, and are marvels of skilful workmanship.

**Messrs. H. Thompson & Co.**

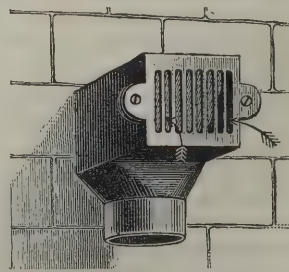
Messrs. H. THOMPSON & Co., Morrow Street, Walworth Road, have a very good collection of paints, &c., their leading and in fact principal feature being a magnetic oxide of iron paint, for which they claim certain advantages. Freedom from acids, anti-corrosive, unadulteration, good body and covering power, and special preservative properties, are the leading points. It is said to have a great affinity for iron, to which its particles adhere with tenacity; at the same time it is equally applicable to wood, on which it forms a complete coating of magnetic oxide of iron. The firm have also a collection of boiler enamel paints, anti-fouling composition, &c.

**Messrs. Hayward & Eckstein.**

The stand of Messrs. HAYWARD & ECKSTEIN, of Union Street, Borough, fitted up with the several examples of their semi-prismatic pavement and other lights, appears to attract as much attention as ever. It would be presumption to attempt to discuss the advantages of daylight over gaslight as so much has been written of late years upon the question, and it is very palpable that if all our underground places can be lighted by such means as HAYWARD & ECKSTEIN's prismatic lights, the thousands of individuals employed in basements day after day the year round will not only benefit in health, which in its turn buoys up the spirits, and assists in producing a better feeling of contentment, but a heavy sum is annually saved to employers, and danger from explosion or fire rendered nil. To those unacquainted with the particular section of these prisms, we may say that the lenses are so arranged that the light may be thrown forward in one direction. One side is nearly upright, and the other formed at such an angle that the light passing through the upper surface strikes the inclined side and is reflected completely within the lens, and issues from the upright side in the required direction. As a further assistance, and should there be any very dark positions, where the floor lights would not have the opportunity of collecting sufficient light from above, the firm manufacture a lens light with a silvered reflector under, arranged to raise or fall, so as to divert the rays to any required part of the basement. Amongst the recent orders executed by the firm for these "daylight" producers has been the First Avenue Hotel, Holborn, Messrs. HOLLAND BROS., Oxford Street, Messrs. FOSTER, PORTER & Co.'s new premises in Wood Street, and they are now laying down from 1,500 to 2,000 feet in some new erections in Chancery Lane. The firm have found it necessary to caution the public against an infringement of their patent, by calling attention to a recent decision of the judges in the Court of Appeal in the case of HAYWARD v. HAMILTON. But Messrs. HAYWARD & ECKSTEIN provide us with ventilation as well as light. They are the makers of the well-known Sheringham inlet ventilator, as illustrated, which, used in connection with



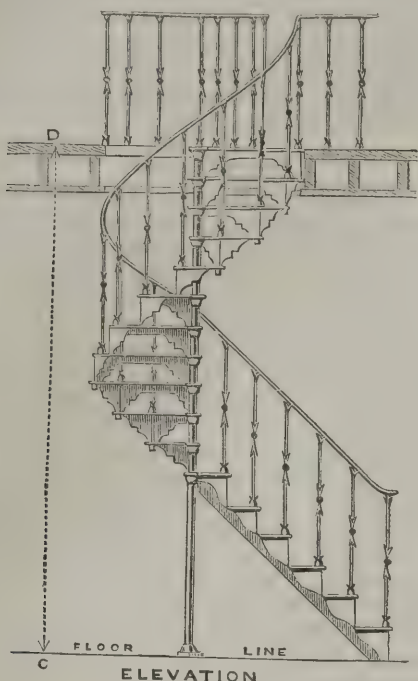
BOYLE's patent mica flap outlet, forms a simple and effectual mode of securing efficient ventilation in reception rooms, kitchens, &c.; in fact, it has been adopted by the firm with success in many buildings of considerable size. We attach a drawing of a mica inlet valve for drawing fresh air into drain or



sewer, self-acting, and closing against back-draught, which prevents the emission of foul air. These are made to fix on 3 or 4-inch pipes, and either vertical or horizontal. Another department of manufactures to which the firm devote par-



ticular attention is iron staircases. Our illustration represents a pattern that is much in request. The mode of making the tread, riser, and spandrel in one is carried out in this instance, securing great rigidity and strength. This staircase is kept in



stock in several sizes for right and left hand, enabling orders to be executed with a promptness not general with such goods. At the present time they are well employed in this branch of their manufactures, as well as in the pavement lights.

#### Messrs. Malkin, Edge & Co.

Messrs. MALKIN, EDGE & CO., Burslem, Staffordshire, are present with a choice collection of their encaustic and other tiles. The well-earned reputation of this firm is an absolute guarantee as to the quality of their productions, and in design and the correct rendering of any speciality they may introduce, they may be pronounced on a par with their most "advanced" competitors. Their pavements embrace a number of chaste designs; the blending of colour appears to have been carefully studied, and in most instances offers agreeable and effective contrast. There is an equally good assortment of printed and encaustic tiles, arranged for hearths, dados, walls, &c. Coming to those intended for grates, jambs, &c., we find an infinite variety of design and colouring, several of the new tints of neutral grade being skilfully worked in. Amongst these are hand-painted specimens of great merit, that clearly points to the capability of the firm to give true artistic effect to any subject entrusted to them to carry out.

#### Webb's Worcestershire Tileries Company, Limited.

No less interesting in this department is the display of tiles made by WEBB'S WORCESTERSHIRE TILERIES COMPANY, Limited, Worcester, who take as wide a range in their manufactures as most of their competitors. Their newest feature consists of printed underglaze hearth and other tiles, tending to make the pattern much more durable; and to give full effect to others, their stand is mainly formed to represent a piece of furniture in which many are set, the combination bringing out the salient points in each, but probably more to the advantage of the tile ornament. There are two specimens of crests of rather large size, hand-painted in full heraldic colours on white tiles, well portrayed, and that cannot fail to attract the eye of the visitor. Amongst the general collection are to be found numerous mosaic and geometrical designs, as well as encaustic tiles, and the designs are so exhaustive that the most fastidious taste should be enabled to satisfy itself. On the same stand are to be found the productions of Messrs. H. C. WEBB & Co., in their patent diachromatised wood, not only arranged for flooring but for other decorative purposes, such as panels for doors, finger plates, balusters, &c. We have so often adverted in recognition of the merit of this ingenious invention that further comment is unnecessary, except to say that time has enabled the patentees to adapt the system to many other uses than that in which it was first introduced to our notice.

#### The Chelsea Lock Co.

The CHELSEA LOCK CO., 103 Lot's Road, Chelsea, S.W., are present with their locks and latches in a variety of sizes and qualities. The patent under which they are made appears to be one of the most useful inventions hitherto introduced by lock makers. One of the defects it desires to remedy is the weakening of doors, caused by fixing a mortise lock of the ordinary type. To fix a "Chelsea" lock, the mortise is cut with a centre-bit and the sinking for the striking-plate in a similar way and with same bit, so obviating all knocking about of the door with mallet and chisel, and is so simple an operation that five minutes will see the door cut and lock inserted and fixed. The lock can be removed as simply as it is inserted, for the fixing screw is so attached to the plate that the action of unscrewing withdraws the lock, and thus prevents the injury often done to a door by prising out with a lever, &c. The fittings and finish of the locks are all that can be desired, and as they become more known must be generally specified.

#### Mr. J. M. Boekbinder.

Mr. J. M. BOEKBINDER, 49 Thornhill Road, Barnsbury, exhibits decorations in carton-pierre and fibrous plaster, and unquestionably carries the palm for this work. The designs display an amount of true artistic feeling but seldom met with, and are certainly second to none that has come under our notice, and it is gratifying to remark that less cannot be said of the finish or of the quality of material. We have here durability in combination with the beautiful. One side of the stand is in drawing-room style of the LOUIS SEIZE period, and in the centre is a finely-carved mantelpiece in pure statuary marble of equal beauty and artistic merit. It is fitted with tile grate, hearth, &c., *en suite*, the latter articles, including the mantelpiece, being contributed by Messrs. ASHTON & GREEN, whose productions of this description have often elicited such well-deserved praise. The other side of the stand is decorated in dining-room style in Flemish Renaissance, the upper part of the wall being hung with hand-painted Gobelin tapestry, also the work of Mr. BOEKBINDER, and we can fairly say of this that the artist's conception can scarcely be too much eulogised.

#### Messrs. Engert & Rolfe.

MESSRS. ENGERT & ROLFE, Barchester Street, Poplar New Town, send their usual collection of felts, which they are accustomed to supply to our own and many foreign Governments, which is perhaps the best recommendation we can accord to it. To show its power of resisting damp, a brick course is exhibited set in a cistern of water resting upon a bedding of the fibrous asphalte, which, it is said, has stood for seventeen years, the bricks being apparently perfectly dry. The other felts made by the firm are also shown, including asphalted roofing felt, and those for lining roofs, viz., inodorous bitumen felt, sarking, and hair felt, but the exhibit appears to the ordinary observer of rather an unpretending character, and scarcely of the importance its merits deserves.

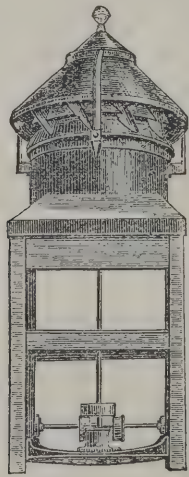
#### Messrs. Martin & Co.

A very notable exhibit is that of Messrs. MARTIN & Co., wood-carvers and decorators in wood, of 27 Newman Street, W., who show a variety of specimens of machine-carving that is attracting a large number of the visitors. The firm seek to illustrate the excellent effects capable of being attained by machine-carving, and their ability to place at the command of persons of moderate means the advantages only to be indulged in by the wealthy classes. For this purpose machine-carving is exhibited in a variety of examples applied to interior decoration. Several specimens of dados are shown in light and dark oak treated in the Chippendale style, all the ornamental parts being machine-carving, and for drawing-room decoration the panels are coloured to suit the appointments of the room, the mouldings of machine-carving being gilt. A noble mantel and over-mantel, in which some fine tracery is visible, is a leading feature in the exhibit, and a bay is fitted up with dining-room appointments in dark oak, consisting of door, architrave and frieze. As compared with composite materials such as fibrous plaster, carton pierre, &c., the advantages claimed, and that are clearly visible, are the sharpness of the lines, and the non-liability to chip or break. When compared with hand-carving, the extraordinary difference in price is unmistakably apparent, and we question if it could be detected except by the most practised eye.



**Mr. James Howorth.**

Mr. JAMES HOWORTH, Victoria Works, Farnworth, near Bolton, sends specimens of his widely-known revolving archimedean screw and radial ventilator. These appliances have been in use for so many years, and have been so extensively patronised, that we must assume they are known amongst the profession generally and a large portion of the public. In looking over the list of names to whom they have been supplied we are struck by the array of names of noblemen and gentlemen to whom they have been supplied, and who have testified to their worth. They are necessarily (excepting when made of the turret form to suit the architecture of a building) similar in shape to many other revolving exhaust ventilators, but the interior of the cylinder is fitted with an archimedean screw, which is attached by a spindle to the revolving hood, that has a series of side valves very closely connected, through which the hot or vitiated air escapes and prevents rain or snow entering. By this means the archimedean screw rotates with the head, causing a continuous strong up current, at the same time arresting the admission of cold air or a down draught. The centres are most delicately poised, and revolve on an imperishable substance, and the arrangement for lubricating is so perfect, that they have been known to work for many years without the slightest attention, the slightest breath of wind being sufficient to turn them, and without noise. Mr. HOWORTH has recently introduced a new pattern with a radial screw, intended to work by power, of which we give an illustration. Situated in the heart of the Lancashire textile in-



dustries, with Yorkshire and Nottinghamshire adjoining, the old-pattern ventilators may be seen by the traveller in the majority of the mills he passes by, and the new one will no doubt secure a large amount of patronage in large manufacturing, where the dust and particles rising from the work being carried on require to be promptly removed.

**Mr. Samuel Deards.**

Mr. SAMUEL DEARDS, of Harlow, Essex, in a span-roofed house, exhibits his well-known system of glazing without putty, which we need not advert to further than to say that it is constantly being adopted by new clients. But Mr. DEARDS' domestic heating apparatus is the speciality we desire to call particular attention to. Utilising an open grate (which he has named the Princess Louise), with tubular bars for his heating surface, an 18-inch fire will enable pipes to be carried to a coil 100 feet distance from the fire, heating all in its way, and even a bath besides, while the return pipe may be carried on a level with, or under the ground, that it may not interfere with the appearance of the room as it reaches the grate. Although the amount of work we have named appears considerable from such a small heating source, Mr. DEARDS can give reference to several he has fixed where it is being effected with the most satisfactory results.

**The Madeley Wood Company.**

The MADELEY WOOD COMPANY, of Ironbridge, Shropshire, still maintain their reputation for appearance and quality of their productions with any of their competitors. Their brindled tiles are known to be of very superior quality, absorbing only a very small quantity of water, and standing any amount of frost. They are perhaps better known as "Broseley"

tiles. The designs are tasteful, and when laid have an attractive appearance. There are probably no makers who have a greater variety of ridges, crests, and finials than the MADELEY WOOD COMPANY, and the latter certainly show artistic merit above the average. The firm, in addition, can boast of a good reputation as makers of fire-clay goods, and their pattern-sheet, illustrated with the various designs mostly in use for manufacturing purposes, will be found useful to those dealing in such goods. Attractive coloured sheets of the building articles are also sent out by the Company.

**Mr. W. White.**

Mr. W. WHITE, 3 Westminster Chambers, Victoria Street, and Abergavenny, is again causing considerable astonishment amongst those who may not hitherto have been acquainted with his "Hygeian Rock" building composition, about the advantages of which we cannot say more than we have done on several previous occasions. An improved method of applying it as a permanent cure for damp walls, recently introduced by the patentee, has met with much success, and may be described as follows:—In the first place, the plaster is removed from the face of the wall, and a cavity for the reception of the composition is formed by specially-made locked tiles (which are vertically fixed against the wall by means of a temporary frame) wherein the composition is poured in a hot liquid state. When cool and set, which happens in a few minutes, the tiles are fixed or locked to the face of the wall, forming an absolutely impervious lining, with an undercut surface, upon which a reader of plaster can be placed, and the wall prepared for decoration within six days from time of application. In this manner any wall, however wet, can be made perfectly dry by the introduction of a vertical impervious lining not exceeding seven-eighths of an inch in thickness.

**The Hopton Wood Stone Company, Limited.**

The HOPTON WOOD STONE COMPANY, Limited, Wirksworth, Derbyshire, content themselves by contributing four specimens of stone from their celebrated quarries, which, however, needs no eulogium from us to recommend it. It is shown in a block each, of rough, sawn, fine, rubbed, and polished, supplemented by another of polished Derbyshire fossil marble, also from their own quarry. This specimen is beautifully marked, though we do not consider it materially exceeds in richness the bulk of what the Company are enabled to supply.

**Messrs. S. H. Watkins & Son.**

A multiform collection of building materials—from bricks and timber to locks and nails—is shown by Messrs. S. H. WATKINS & SON, timber merchants, &c., Brentford. There is scarcely an article required in the building of a house that may not be seen on this stand, but beyond the multiplicity of specimens there is not anything that requires especial remark. Messrs. WATKINS also cater for the adornment of our last resting-place, exhibiting several examples—tombs, monuments, head-stones, &c.

**Mr. J. Matthews.**

Weston-super-Mare is again represented in the person of Mr. J. MATTHEWS, of the Royal Pottery, who has secured his usual position at Bay 24. So far as building materials are concerned, POOLE's patent bonding roll square-cornered roofing tiles are the principal articles exhibited, and as these have been before the trade for many years, further remarks upon them are quite unnecessary. But it is in the ornamental portion of his manufactures that Mr. MATTHEWS's name has become so popular. He has brought the articles made from the red clay of his district to great perfection, and the moderate prices at which they are offered has caused an immense sale of them, which is likely to increase seeing that this colour is now so extensively used. While sending a few excellent specimens of vases and other garden ornaments, the display in this section is not so strong as we remember to have seen it on some previous occasions.

**Mr. J. B. Hammill.**

Tiles from Bridgwater, one of the principal "homes" of the industry, are exhibited by Mr. J. B. HAMMILL, of the Saltlands Brick and Tile Works in that town. The designs are varied, but represent the usual "make" of the firm, who have secured a good reputation for quality. The double Roman, triple, and angular are conspicuous, plain and ornamental ridges, hips, finials, &c., helping to make up a very creditable display.



**Messrs. Underhill & Co.**

A small but meritorious assortment of marble, enamelled slate and wood mantelpieces, grates, and the usual *entourage* is exhibited by Messrs. UNDERHILL & CO., 170 and 173 Upper Thames Street. Some good low-priced registers will be found amongst the collection, as well as kitchen ranges. Rain-water goods and builders' castings supplement the exhibit, and we may add that the firm have recently entered upon the manufacture of marble goods, and are extensive dealers in slabs and builders' materials generally.

**Messrs. Yates, Haywood & Co.**

Occupying the position hitherto assigned to Messrs. WELLS & Co., at the east end of the hall, Messrs. YATES, HAYWOOD & Co., of Upper Thames Street, and the Effingham Works, Rotherham, have the largest exhibition in the building, comprised of their principal manufactures. Mantelpieces, grates, and stoves form the principal portion of the collection, arranged in suites with their kindred accessories. There are many elegant designs to be found amongst them, and including the tile work, exhibit true artistic feeling. The firm are also devoting considerable attention to mantels and over-mantels in cast iron, and a variety of these are shown, the majority of the designs being of the "Queen Anne" and "Adams" character. The colouring of some of them is unique. Thus, we are introduced to certain specimens in the Wedgwood neutral green, with white ornament, that can scarcely be identified from a piece of pottery, and the same design is in a few instances shown in three different colourings. Another excellent example is a bold conception for a dining-room in dark oak. The collection of railings in cast-iron after the style of wrought-iron are remarkably good in design. There are other features of interest in the exhibit, and kitchen-ranges in many varieties assist in making up the display.

**Messrs. Williams & Nash.**

Messrs. WILLIAMS & NASH, 9 Castle Street, Holborn, and Church Road, Battersea, are present with a choice assortment of marble chimneypieces, and with each of which are shown tile grates of the latest design, together with tile hearths and marble kerbs *en suite*. The firm pay special attention to the manufacture of the latter, and are offering a marble fender complete, with encaustic tile hearth, for the very moderate sum of forty shillings. Messrs. WILLIAMS & NASH's long experience in the business gives them facilities for obtaining the productions of all the most important Continental quarries on very favourable terms, thus enabling them to place the finished article in the market at prices that will stand comparison with all comers. Another very important department of the firm's is the work executed in serpentine, they being agents for those well-known and unsurpassably fine quarries at Poltesco. The most handsome mantelpiece on their stand is one made of this beautiful English marble, and into the structure of which enter three or four different varieties of it, thereby greatly enhancing its effectiveness. Fonts (one being shown), columns, vases, pedestals, and every description of building dressings, are now being much used in this marble, as it possesses the advantage over all others of not losing its polish when exposed to the atmosphere; and Messrs. WILLIAMS & NASH are also in a position to execute orders for such with the greatest accuracy and dispatch.

**The Sneyd Colliery and Brickwork Company.**

THE SNEYD COLLIERY AND BRICKWORK COMPANY, Limited, Burslem, Staffordshire, send a small but good collection of glazed bricks, a speciality with them, the quality of which is well known to most of the trade. There are some good specimens of marbled designs, Grecian patterns, and printed work, as well as self-coloured. A small collection of fire-clay goods, drain-pipes, &c., complete the display.

**Messrs. Clements, Jeakes & Co.**

Messrs. CLEMENTS, JEAKES & CO, 51 Great Russell Street, Bloomsbury, W.C., are in their old position at Bay 14, with apparatus and other sanitary appliances. Of the former, that known as "EDWARD CLEMENTS' Patent Self-reversing Dash-wheel Washing Machine" has several noteworthy features. The machine is 6 feet in diameter, and consists of an outer case and inner revolving cage, actuated by pulleys upon a

central shaft passing through the case; the central shaft is driven from a counter-shaft overhead, and fitted with a set of automatic striking gear which, by means of a crossed and open strap, causes the inner and revolving drum to reverse its direction at every three revolutions, thereby preventing the tendency of rolling up or balling the fabrics undergoing cleansing, and preserving them from any injury. A similar machine, only 4 feet in diameter, is also shown, for use where no line of shafting exists, the motive-power being a vertical steam-engine connected with it, and capable of driving a wringing-machine and mangle as well. As a proof of the efficiency and value of these machines we may mention they are in use at the War Department, Herbert Hospital, Woolwich, and many of the large hotels and asylums throughout the country.

**The London Patent Automatic Disinfecter Company.**

THE LONDON PATENT AUTOMATIC DISINFECTOR COMPANY, 53 Queen Victoria Street, and Cannon Street, E.C., exhibit their simple and ingenious invention for deodorising closets and drains. Our illustrations show the apparatus itself, and as it appears when connected with the closet underneath the seat.



It consists of a copper globular vessel, to which is attached a central pipe for filling with a disinfectant, a metal pipe on the right-hand side for connecting to the water supply, and one of very small diameter on the left to be carried over the top of the closet-pan. The copper ball is filled with any powdered disinfectant that has the property of being rendered soluble on coming into contact with cold water. On lifting the plug to obtain the flush of water a portion of the discharge passes into the copper vessel, rendering a small portion of the contents soluble, and carrying the disinfectant in the form of fluid through the small pipe into the pan, the clear water and the disinfectant meeting at the same time, and rendering the entire body a deodoriser and flushing closet and drain every time it is used. The advantage of this appliance over the few others attempting to effect the same object is that it deals with solid disinfectants instead of liquids, making its own liquid, and doing this by automatic action of an unerring character; and by using the solid material sufficient can be stored in the small copper holder to last a very long time. The Company fearlessly assert that it will hold sufficient to last in a domestic closet in daily use for twelve months, and to provide a disinfectant for 10,000 gallons of water. We are informed that it is being extensively taken up by owners of emigrant ships, where the closet arrangements are generally susceptible to great improvement; and we find that some manufacturers of closets now exhibiting at this exhibition are showing the invention in connection with their own appliances. In adopting this apparatus we are not confined to one disinfectant, the Company being prepared with several, all soluble, and possessing an aromatic odour.

**Messrs. H. W. Cooper & Co.**

Glass ventilators in a variety of forms are shown by Messrs. H. W. COOPER & Co., Limited, Upper George Street, Edgeware Road. Mr. COOPER was the original inventor of the circular glass ventilator for attaching to windows, and that we now find in such extensive use. These form a conspicuous feature in the exhibit, and it would be difficult to find a better-looking or more easy means of attaining the desired object in houses where a complete system of ventilation is not in existence than by these glass window appliances. No injury to walls or decorations are necessary, no unsightly excrescences are visible. The taking out of one pane of glass, and the insertion of another containing the ventilator, effects the desired object, which can be regulated to the minutest point. For very large windows the firm have introduced a bold one of oblong form running on ivory rollers, that has a handsome appearance, and, when opened to its full extent, is capable of admitting a larger amount of fresh air than any other of its kind we are conversant with.



PRIZE MEDALS.—London 1851; Paris 1855; London 1862; Paris (Silver) 1867; London 1874.

**WILLIAM TONKS & SONS,  
BRASSFOUNDERS & MANUFACTURERS**Of the various kinds of  
WORK IN BRASS, IRON, AND OTHER METALS, BOTH PLAIN AND ARTISTIC,  
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HOOKHAM'S PATENT SASH LINE, for securely hanging heavy sashes.

" PATENT PICTURE LINE AND ADJUSTING FASTENERS, for securely hanging pictures, and adjusting their height with facility.

CURRALL'S PATENT VENTILATORS, for enabling fresh air to ascend to the top of the room, and to be diffused without draught.

THE ARCHITRAVE VENTILATOR (Currall's Patent) for circulating the air in rooms, without draught.

HAYWARD'S REGISTERED FLUSH BOLT, for preventing the second folding door being locked when the first door is not bolted.

ALLEN'S REGISTERED HAT HOLDER, for fixing under pews and chairs.

SKERRETT'S PATENT FANLIGHT OPENER AND FASTENER, for fastening fanlights at any distance by pulling a cord.

PATENT DOOR CHAINS AND BOLTS, for securing doors when shut, and when open a little way for ventilation.

" WEDGE CASEMENT STAYS, for fastening casements by means of Wedge-shaped arms.

" IMPROVED KEYED DOOR FURNITURE, with the Patent Key fitting into shoulder of knob for securing it to spindle of lock.

" BOOKCASE FITTINGS, for altering the arrangement of shelves with facility.

" SASH OPENERS AND AUTOMATIC FASTENERS, for automatically fastening windows when shut, and when slightly open for ventilation; and for opening large windows with cords.

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CHELSEA PATENT

**CENTRE BIT REVERSIBLE MORTISE LOCK,**

A FIRST-CLASS LOCK AT A LOW PRICE.

ADVANTAGES.

1. Mortise cut by Centre Bit in five minutes.
2. Mortise cut without knocking door about with mallet and chisel.
3. Mortise does not weaken door.
4. Screw draws lock out for painting down door without injury to door or lock.
5. Furniture Roses can be fixed with long screws.

6. Catch bolt is reversible.
7. Follower works sweetly both ways.

CONSTRUCTION.

Lock is well and strongly made.  
Cases are of rolled steel. Bolts are of brass.  
Follower bearings are bushed, and made extra deep.  
Springs are made by G. Salter & Co., and are  
GUARANTEED.

MANUFACTURED BY THE

**CHELSEA LOCK COMPANY,**

103 Lot's Road, Stanley Bridge, Chelsea, S.W.

**THE "PARAGON" PATENT GAS BATH.**

The Cheapest Bath of this kind in the Market. A Liberal Discount to the Trade.

This Bath is full size, 5 ft. 6 in. long, japanned oak outside and white marbled inside, copper bottom under burner, with circulating pipe from the centre to the foot, thereby heating the water quicker and at less cost than in ordinary baths.



John Smeaton's Closets are the Best in the Market.



Price 62s. 6d. 1. John Smeaton's Climax Valve Water-Closet. Price 75s. 0d. 2. John Smeaton's Plug Valve, in one piece, earthenware.

Price 25s. 6d. 3. John Smeaton's Eclipse Flushing-out. To be obtained only of

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Estimates for Sanitary Plumbing, Heating by Hot Water, Steam, Hot Air. Catalogue of the "Smeaton" Sanitary Appliances on application.

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FIRE-PROOF CONSTRUCTION.**MR. BARRETT, { York Buildings, Adelphi,  
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All complete, any colour, 5d. per foot; best quality 5½d.

Wire, Cane, and other Blinds. Estimates free.

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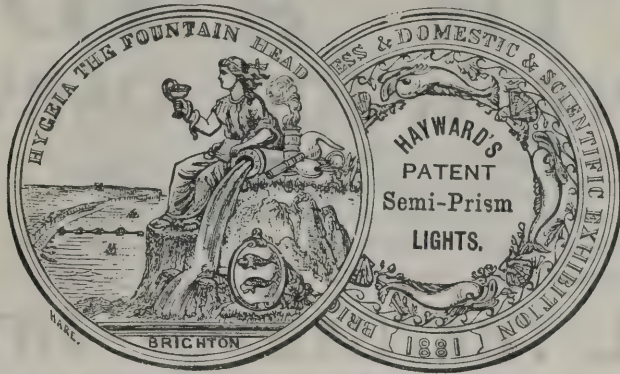
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**"DAYLIGHT v. GAS" IN BASEMENTS.**

Medal Awarded,

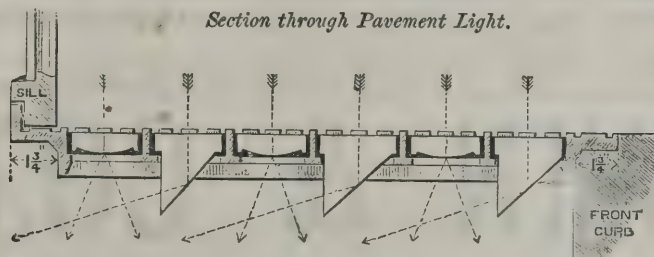


Brighton, 1881.

**HAYWARD'S PATENT "SEMI-PRISM" LIGHTS.**

These are the only **LIGHTS** for directing **DAYLIGHT** into **BASEMENTS**.

LORD JUSTICE BRAMWELL, in giving judgment, said: "The Plaintiff had discovered a Light-Directing Pavement Light."



Section through Pavement Light.

It will be seen from the above Section that the "**SEMI-PRISM**" **LENSES** are so arranged that the **Light** may be thrown forward in one direction. One side is upright, or nearly so, and the other inclined to it at such an angle that the **Light** passing through the upper surface may strike the inclined side, and be reflected completely within the **Lens**, and issue from the nearly upright side in the required direction.

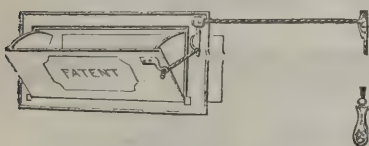
**CAUTION.**

This result cannot be obtained from the ordinary **Prism** or **Ships' Deck Lenses**, or from any other kind of **Pavement Light**.

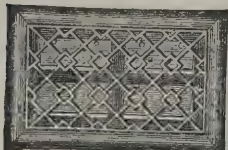
**USERS OF INFRINGEMENTS ARE LIABLE.**

Architects are respectfully requested to specify "**Hayward's Patent Semi-prism Lights**," or they may have **Imitations** supplied which cannot give the desired result.

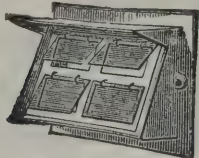
SHERINGHAM INLET.



BOYLE'S OUTLET.

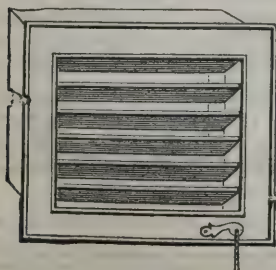


BRASS TRELLIS FRONT



BACK VIEW.

VENETIAN VENTILATOR.



INLET.

**HAYWARD'S IMPROVED CIRCULAR AND STRAIGHT IRON STAIRCASES**, Tread, Riser, and Spandril in one.

**HAYWARD'S IMPROVED SAFETY COAL PLATES**. Illuminating, Ventilating, or Solid Iron.

**HAYWARD'S SHERINGHAM VENTILATOR** (Inlet), for the Introduction of **FRESH AIR** through an External Wall without a Draught.

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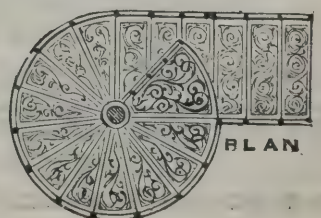
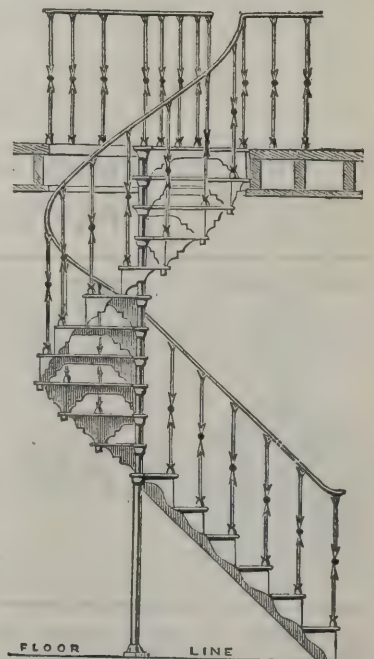
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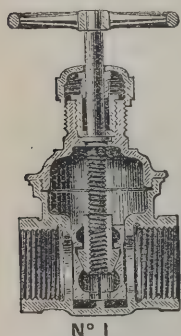
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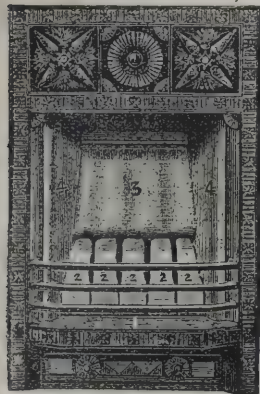
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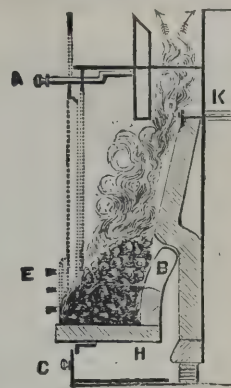
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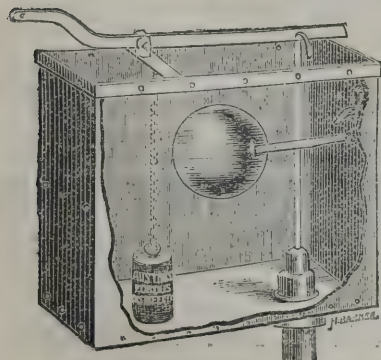
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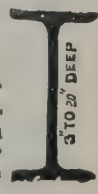
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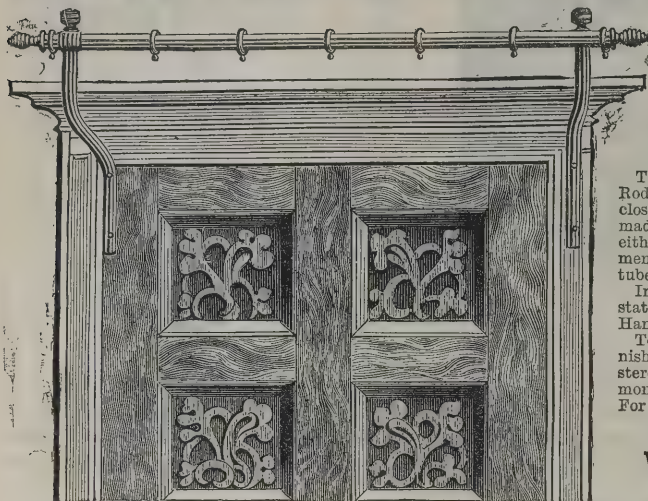
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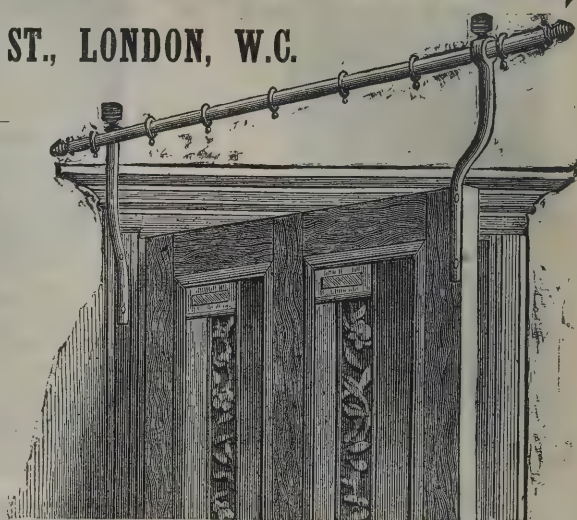
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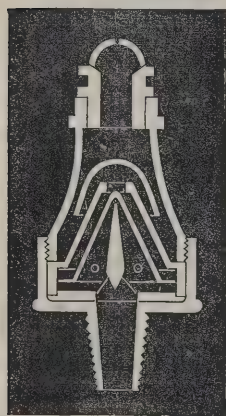
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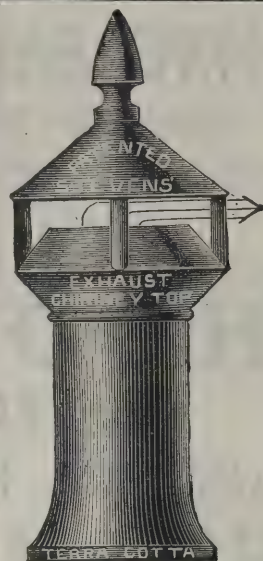
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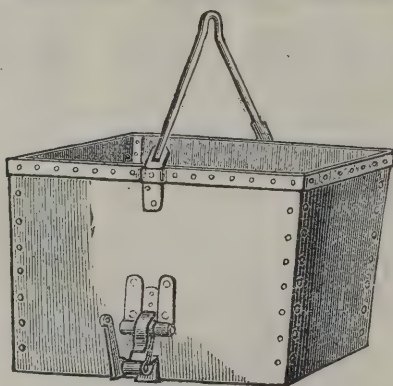
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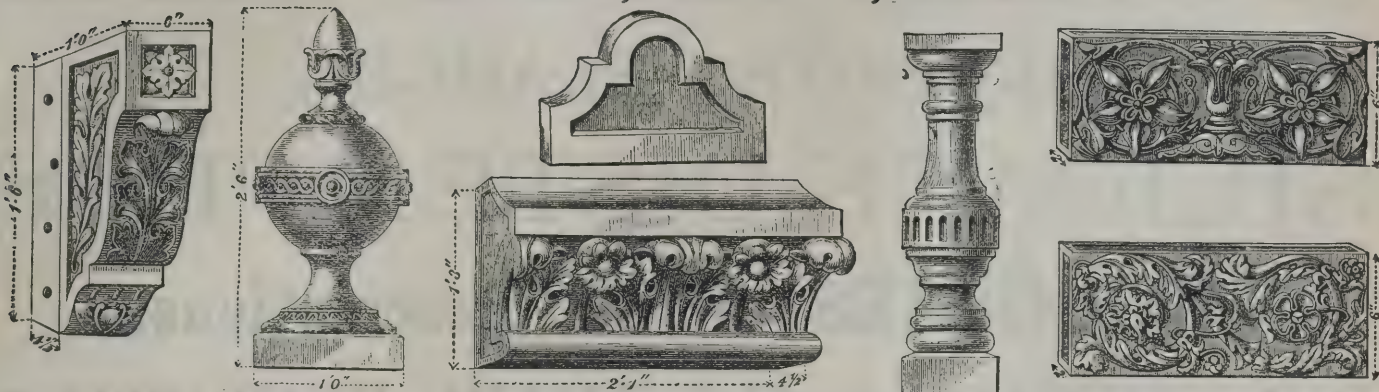
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# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, APRIL 5, 1884.

### COMPETITIONS OPEN.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**SUNDERLAND.**—May 19.—Designs are invited for Laying out Twenty Acres of Land, the Mill Farm and Broad Meadows, Durham Road, Sunderland, for Villas, Terraces, or Street Rows, with Sewerage, &c. Premiums of Thirty and Twenty Guineas. Messrs. Duncan & Duncan, Solicitors, 3 Market Place, South Shields.

### CONTRACTS OPEN.

**ALPHINGTON.**—April 10.—For Building Dwelling-house and Offices. Messrs. J. W. Rowell & Son, Architects, Newton Abbot.

**APPLETON, WIDNES.**—For Building Catholic School. Mr. H. V. Krolow, Architect, 24 North John Street, Liverpool.

**ARDLEY.**—April 14.—For Erection of Farmhouse, Out-buildings, and Two Cottages, for the Duke of Marlborough. Mr. G. L. Watson, Estates Office, Blenheim.

**BARNESLEY.**—April 9.—For Construction of Main Sewer in Cranbrook Street. Mr. J. H. Taylor, Borough Surveyor, St. Mary's Place, Barnsley.

**BEDLINGTON COLLIERY.**—April 12.—For Building Wesleyan Chapel. Mr. James Gray, Bedlington Colliery.

**BOSCOMBE.**—April 7.—For Dormitories, Entertainment-room, Lavatories, &c., to Coffee Tavern. Mr. C. T. Miles, Architect, Observer Chambers, Bournemouth.

**BROMYARD.**—April 21.—For Building School and Master's House. Mr. A. H. Parker, Architect, 5 Foregate Street, Worcester.

**BROUGHTON.**—April 19.—For Works of Restoration at Parish Church. Rev. W. Wyatt, Broughton Rectory.

**CAMBRIDGE.**—April 15.—For Building Congregational Church. Messrs. Banks & Townsend, Architects, 23 Finsbury Circus.

**CUCKFIELD.**—April 7.—For Additions to Mytten House. Mr. F. W. Holloway, Hayward's Heath.

**DARENTH.**—April 14.—For Boundary Wall to Gore Farm. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**DELPH.**—April 5.—For Building Sunday Schools. Mr. A. Banks, Architect, 231 Rochdale Road, Oldham.

**DUBLIN.**—April 15.—For Alterations to Nos. 22 and 23 Thomas Street. Mr. D. J. Freeman, City Architect, City Hall, Dublin.

**DUDLEY HILL.**—April 11.—For Building Store, with Shops, Warehouse, Dwelling-house, &c. Mr. W. H. Howarth, Architect, Cleckheaton.

**ECCLESHILL.**—April 9.—For Building Baptist Chapel and School. Mr. Wilson Bailey, Architect, 9 Market Street, Bradford.

**ELLAND.**—April 12.—For Building Mistal, Coach-house, and Cart Shed. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**ELLAND.**—April 15.—For Building Fireproof Warehouse at Spa Well. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**FRIZINGHALL.**—April 7.—For Building Residence. Mr. J. Ledingham, Architect, 1 New Ivegate, Bradford.

**HIPPERHOLME.**—April 9.—For Additions to House. Messrs. Jackson & Fox, Architects, 22 George Street, Halifax.

**HUCKNALL TORKARD.**—For Additions to Cigar Factory. Mr. A. H. Goodall, Architect, Nottingham.

**IPSWICH.**—April 9.—For Additions to Printing Office. Mr. W. Eade, Architect, Post Office Chambers, Ipswich.

**KENDAL.**—April 11.—For Enlarging Mills and Building Stabling, Warehouse, Shops, &c. Mr. Stephen Shaw, Architect, Kendal.

**LOWESWATER.**—April 7.—For Restoration of Church. Mr. W. Deighton, Architect, 3 Pow Street, Workington.

**MORPETH.**—April 18.—For Extension of County Lunatic Asylum. Mr. J. Cresswell, County Architect, Moot Hall, Newcastle-on-Ty.

**NORTH SHIELDS.**—April 17.—For Construction of Brick Gasholder Tank. Mr. W. B. Davidson, 97 Bedford Street, North Shields.

**NAFFERTON.**—April 9.—For Building Pair of Semi-detached Villas. Mr. W. H. Todd, County Buildings, Hull.

**PETERBOROUGH.**—April 14.—For Construction of Concrete and Brick Gasholder Tank. Mr. G. E. Stevenson, Gasworks, Peterborough.

**PORTCRAWL.**—April 7.—For Additional Block to The Rest. Mr. John Prichard, Architect, Llandaff.

**ROSSENDALE.**—For Building Edge Side Holme Church. Mr. T. Bell, Architect, 14 Grimshawe Street, Burnley.

**SEDBERGH.**—April 7.—For Building Swimming-Bath, Gymnasium, and Sanatorium at Grammar School. Mr. W. Wright, Surveyor, Lancaster.

**SOVERBY BRIDGE.**—April 15.—For Building Five Shops and Seven Houses (Mason's Work). Mr. Wilkinson, Architect, Sowerby Bridge.

**SHAW.**—April 7.—For Building Mill. Messrs. Wild & Collins, Architects, 15 Clegg Street, Oldham.

**STOCKPORT.**—April 7.—For Building Fireproof Cotton Mill. Mr. J. Stott, Architect, 22 Clegg Street, Oldham.

**TOOTING GRAVENY.**—April 17.—For Re-seating Parish Church and other Works. Mr. W. P. Mellhuish, High Street, Tooting Graveney, S.W.

**TOTTENHAM.**—April 21.—For Construction of Brick and Pipe Sewers. Mr. de Pape, Engineer to the Local Board, High Road, Tottenham.

**WAKEFIELD.**—April 11.—For Works in Construction of Sewage Outfall at Agbrigg. Mr. W. Crutchley, C.E., Town Hall Chambers, Wakefield.

**WEST HAM.**—April 8.—For Erection of School Buildings. Mr. J. T. Newman, Architect, 2 Fen Court, E.C.

**WORKINGTON.**—April 8.—For Building School and Master's House at Westfield. Mr. James Howes, Architect, 13 Bridge Street, Workington.

### TENDERS.

#### ANSDELL.

For Building two Pairs of Villas at Ansdell. Mr. THOS. P. WORTHINGTON, Architect, Blackpool.

Accepted conditionally.

Hill & Moister, Great Marton, excavator, drainer, and bricklayer	£510	0	0
Dean & Shore, Blackpool, mason and flagger	270	0	0
Pye, Blackpool, slater	80	0	0
Coulston, Blackpool, plumber, glazier, painter, gasfitter, bellhanger	214	0	0
Sutton, St. Anne's-on-Sea, plasterer	102	0	0
Shepherd, Walmesley & Smith, St. Anne's-on-Sea, woodwork	478	0	0

#### ABERDEEN.

For House, No. 9 Queen's Gardens, Aberdeen. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.

Milne, mason.

Johnston & Fullerton, carpenter and joiner.

McGregor & Shand, slater.

Masson & Findlay, plasterer.

Robertson, plumber and gasfitter.

Whyte, painter and glazier.

For Additions to Mile End House, Aberdeen, for Mr. Andrew Marshall. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.

Messrs. J. & J. Ross, mason.

Grant, carpenter.

Milne, slater.

Kirk & Pigott, plasterer.

Gunn & Elder, plumber and gasfitter, &c.

Mason & Son, painter and glazier, &c.

Total amount of Tenders, £660.

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ELIZABETHAN

AND  
RENAISSANCE

GRATES

STOVE GRATES

KITCHEN RANGES

FENDERS

AND

RAILING

MANTELS

OVER MANTELS

ART TILES

AND

HEARTHES

STOVE GRATE MANUFACTURERS AND IRONFOUNDERS,

# GEORGE WRIGHT & Co.

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And 238 Upper Thames Street, Blackfriars, E.C. — WORKS, ROTHERHAM



## ARBROATH.

For Execution of Works in Connection with the Water Supply, Keptie Hill, Arbroath.

## Accepted Tenders.

Anderson, mason	£3,397 0 0
Anderson & Co., ironwork	1,884 0 0
McAndrew, plumber	127 0 0
Christie, joiner	65 0 0

## BARNESLEY.

For Pulling Down old Building and Erecting Stable, Coachhouse, &c, and Alterations to House at Barnesley. Mr. HERBERT CRAWSHAW, Architect. Quantities by the Architect.

## Accepted Tenders.

Lock, mason.	
Walter, joiner.	
Hutchinson Bros., plumber, &c.	
Fleming, slater and plasterer.	
Goodyear, painter.	
Total cost, £648.	

## BOSTON SPA.

For Building House and Shop, Boston Spa. Mr. HARRY MAY, A.R.I.B.A., Architect, Leeds. Quantities by Mr. W. H. Wood.

## Accepted Tenders.

Rhodes, mason.	
Shires & Son, joiner.	
Bedford, plumber and glazier.	
Waring, slater.	
Hemmingway & Wright, plasterer.	
Bradley, painter.	
Total, £596 10 0	

## BOURNEMOUTH.

For Building Dwelling-house, West Hill Road, Bournemouth. Messrs. CREEKE & GIFFORD, Architects.

Musgrave	£2,368 0 0
Tilsed	2,980 0 0
Huxtable	1,932 9 0
McWilliam	1,819 0 0
Smith	1,795 0 0
Hoare & Co.	1,781 0 0
Stanley	1,780 0 0
Jones & Son	1,750 10 0
Bevan	1,729 10 0
Rigler & Crane	1,725 0 0
Ridout	1,625 0 0
George	1,611 0 0

## Amended Tenders after deductions.

Jones & Son	1,575 0 0
Bevan	1,562 0 0
Ridout	1,460 0 0
SMITH (accepted)	1,450 0 0
Rigler & Crane	1,425 0 0

## BRAINTREE.

For Rebuilding Business Premises at Braintree. Mr. CHAS. LONG, Architect, 21 Upper Gloucester Place, N.W. Quantities by Mr. Arthur W. Saville, 99 Strand, W.C. Langridge & Sons

## BRIDGEND.

For Additions to Wainskel House, Bridgend, for Daniel Owen, Esq. Mr. J. P. LAMBERT, Architect, Bridgend. THOMAS, Llantrissant (accepted)

## BRIGHTON.

For Lady Altar in the Catholic Church, Norton Road, West Brighton, for the Rev. Silvester A. Donnelly. Mr. JOSEPH STANISLAUS HANSOM, F.R.I.B.A., Architect, 27 Alfred Place West, South Kensington. PORTER, Chelsea (accepted)

## BRISTOL.

For Building Offices, Warehouse, and Mills, Canon's Marsh, Bristol. Mr. HERBERT J. JONES, Architect, Bristol.

Eastabrook & Sons	£4,294 0 0
Crocker	4,239 0 0
Walters & Son	4,175 0 0
Brock & Bruce	4,156 0 0
Stephens & Bastow	4,000 0 0
Church	3,991 0 0
Davis	3,984 0 0
Humphreys	3,977 0 0
E. & T. Hatherly	3,957 0 0
Howell & Son	3,900 0 0
Cowlin & Son	3,875 0 0
Bevan	3,800 0 0
LEWIS (accepted)	3,795 0 0
All of Bristol.	

## CANTERBURY.

For Fittings and Decorations, the Fleece Inn, High Street, Canterbury, for the Star Brewery. Mr. FRED. M. PUTLEY, Architect, 5 Southampton Buildings, W.C. WARNE (accepted)

## FERNDALE.

For Police Station, Ferndale, Glamorganshire. Mr. J. P. LAMBERT, Architect, Bridgend. Quantities by the Architect.

Morgan, Aberdeen	£1,397 0 0
Thomas, Bridgend	1,387 10 0
Williams & Co., Ferndale	1,329 0 0
D. Davies, Cardiff	1,250 0 0
D. J. DAVIES (accepted)	1,243 4 1

## FOLKESTONE.

For new Organ-chamber and Vestry to the Parish Church of Christchurch, Folkestone. Mr. A. R. BARKER, Architect. Quantities by Messrs. J. S. Lee & Son.

Wiles, Dover	£2,180 0 0
Goss, Torquay	2,036 2 2
Webster, Folkestone	1,884 0 0
Prebble, Folkestone	1,862 0 0
Hayward & Paramore, Folkestone	1,858 0 0
Unwin, Folkestone	1,832 7 0
Petts & Son, Folkestone	1,806 0 0
Dunk, Folkestone	1,790 0 0
Brooks, Folkestone	1,656 0 0
MOODY, Folkestone (accepted)	1,530 0 0

## ENFIELD.

For Erection of Water-tower, for the Enfield Local Board. Mr. W. KETTERINGHAM, Surveyor.

Patman, Enfield	£1,547 0 0
Gardner, Waltham	1,536 0 0
Burman, Enfield	1,500 0 0
Cooke & Co., Battersea	1,340 0 0
FAIRHEAD, Enfield (accepted)	1,286 0 0

## FORT WILLIAM.

For Pier, Quay, and Approach Walls in concrete, with Tidal Basin, Dredging, and Foundations under low water, for Mr. Donald P. McDonald, the Distillery, Fort William, N.B. Mr. G. W. BRENAN, C.E., Oban.

A. & K. Macdonald, Killin Railway	£3,215 10 0
Fraser, Inverness and Nairn	5,427 11 9
Moffat & Sons, Paisley	5,345 4 6
Baine & Co., Bo'ness	4,990 19 1

## HARRINGTON.

For Works of Restoration at Harrington Church. Mr. WM. DEIGHTON, Architect, Workington.

## Accepted Tenders.

Cook, mason	£411 17 6
Porter & Pearson, joiner	353 17 0
Whitfield, slating	149 0 0
Sherwood & Armstrong, varnishing and glazing	89 0 0
Lawson, plasterer	58 0 0
Walker, plumbing	21 10 0

## HORSHAM.

For Alterations and Additions to Westbrook House, near Horsham, and Erection of New Lodge. Messrs. WILLIAM WALLACE & FLOCKHART, Architects, Bond Street. Quantities supplied by Mr. Frederick Thomson.

Potter & Sons, Horsham	£2,670 0 0
Goddard & Sons, Dorking	2,520 0 0
Colls & Sons, Dorking and London	2,424 0 0
Robertson, London	2,420 0 0
Richardson & Sons, Horsham	2,346 0 0
Peters, Horsham	2,169 10 0
Toms, London	2,083 0 0
Charwood Bros., East Grinstead	2,052 0 0

## ILKESTON.

For Building Board School, Ilkeston. Mr. J. TAIT, Leicester, Architect. Quantities supplied.

MANNERS, Ilkeston (accepted)

## LONDON.

For Heating St. Dominic's Priory, Haverstock Hill; "Ecclebourne," Worsley Road, for Mr. Bradley; Theobald's Park, Waltham Cross, for Sir Henry Meux; and Hospital at Weston-super-Mare. BACON & Co. (accepted).

For Building Detached Residence, West Hampstead, for Mr. J. Gibson. Mr. BANISTER FLETCHER, Architect. MANSBRIDGE (accepted)

For the Erection of the First Portion of St. Cuthbert's Church, Kensington, and Alterations and Additions to the Temporary Church, from the designs and under direction of Mr. HUGH ROUMIEU GOUGH, F.R.I.B.A., 12 Carlton Chambers, Regent Street. BELHAM & Co. (accepted)

For Construction of Sewer in Cursitor Street, Chancery Lane. K Ilett & Bentley

M'Kenzie & Co.	£530 0 0
Marshall	458 0 0
Cooke & Co.	450 0 0
Nowell & Robson	430 0 0
Killinghack	377 0 0
NEAVE & SON (accepted)	343 0 0

For the Erection of a Villa at Corner of West Hill Road and Lebanon Gardens, Wandsworth, for Mr. S. S. Howell. Messrs. EBBETTS & COB, Architects, Savoy House, 115 Strand, and at Colchester. Quantities supplied by Mr. T. E. Murray, 12 Buckingham Street, Strand.

Perkins	£1,948 0 0
Sanders	1,932 0 0
Macey & Sons	1,777 0 0
Hartner	1,764 0 0
Holt	1,725 0 0
Steel Bros.	1,690 0 0
Baylis	1,593 0 0

For the Extension of Premises, Chiswell Street, Camberwell, for Messrs. Carter, Paterson & Co., under the superintendence of Mr. WILLIAM EYE, 10 Union Court, Old Broad Street, E.C.

Hubble & Trotter	£1,345 0 0
Harris & Wardrop	890 0 0
D. D. & A. Brown	880 0 0
Downs	839 0 0
Aldridge & Jenvey	820 0 0
Higgs	815 0 0

For Alterations and Additions to the Eagle Tavern, Chobham Road, Stratford, E, for Mr. J. J. Simmons. Mr. FREDERICK A. ASHTON, Architect.

Hearle & Son	£579 0 0
North Brothers	540 0 0
Nicholls	505 0 0
Toole	4 5 0
FURLONG (accepted)	399 15 0
Mansfield	385 0 0
Buckle	363 10 0
Webb	345 0 0
Young	305 0 0

For New School and Class-rooms at the Baptist Chapel, Catford Hill, Catford, S.E. Messrs. WILSON, SON, & ALDWICKLE, Architects.

Hobbs	£2,595 0 0
Taylor & Son	2,179 0 0
Mills	2,086 0 0
Amer	2,065 0 0
Nightingale	2,070 0 0
Cox	2,064 0 0
Shurmer	2,061 0 0
Higgs & Hill	2,060 0 0
W. & F. Croaker	2,050 0 0
Jerrard	1,996 0 0
Holliday & Greenwood	1,789 0 0

## LONDON—continued.

For Alterations to the White Horse Public-house, Shore-ditch. Messrs. WILSON, SON & ALDWICKLE, Architects.

Hearle	£1,345 0 0
Shurmer	1,197 0 0
Drew & Cadman	1,180 0 0
Mills	1,088 0 0
Staines & Son	1,073 0 0

For Erection of Shops at Crouch End. Mr. W. SMITH, Architect.

Anky	£1,184 0 0
Shurmer	1,125 0 0
Clark Bros.	1,112 0 0
Hurst	1,105 0 0
Ebbage	1,079 0 0
Dunford & Langham	1,049 0 0
Johnson	1,045 0 0
Larke	969 0 0
Mattock Bros.	952 0 0
Harper	941 0 0
Stevens	923 0 0
Wood	865 0 0

## LIMERICK.

For Building a Dwelling-house at Fannstown, near Kilmallock, Co. Limerick. Mr. P. J. DUBIG, Architect, Limerick.

Leahy, Limerick	£690 0 0
Joyce, Kilmallock	525 0 0
Hayes & Coghlan, Limerick	494 0 0
Hurley, Fermoy	465 0 0
WALSH, Cork (accepted)	411 0 0

Stone, lime, sand, &c., provided by the proprietor.

## LINCOLN.

For Construction of Gasholder Tank at the Gasworks, Bracebridge, Lincoln.

Martin & Sims, Lincoln	£4,715 0 0
Otter & Broughton, Lincoln	4,080 3 10
Sherwin, Boston	3,991 5 0
H. S. & W. Close, Lincoln	3,967 17 6
Wright, Lincoln	3,723 0 0
CROSBY & SONS, Lincoln (accepted)	3,551 17 6

## LIVERPOOL.

For Heating Apparatus at Ilam Hall, Ashburne, for Mr. Hanbury; at Monkstown Park, Ireland, for Mr. Cairns, J.P.; at Residence, Sefton Park, Liverpool, and at Conservatory, Kent House, Ealing. RENTON GIBBS, Liverpool (accepted).

## NEWBURY.

For Erection of Four Almshouses, Newbury, Berks. Mr. HENRY FLINT, Architect, Newbury.

Elliott	£876 0 0
Elms	840 10 0
Whiter	825 0 0
Bailey	805 16 6
Taylor	777 0 0
Botsford	769 0 0
JAMES (accepted)	743 0 0
Harrison	690 0 0

## NEW SWINDON.

For Alterations and Additions to Sewing Factory, New Swindon, for Messrs. J. Compton & Sons, Army Clothing Contractors London. Mr. JOHN J. SMITH, A.R.I.B.A., Architect, Swindon.

Salmon, London	£1,234 0 0
Henley, Swindon	830 0 0
Wiltshire, Swindon	820 0 0
PHILLIPS (accepted)	780 0 0

## PENCOED.

For Addition to a House at Pencoed, near Bridgend, Glamorganshire, for Mr. W. Conibear. Mr. J. P. LAMBERT, Architect, Bridgend.

McGaul, Bridgend	£520 0 0
Richards, Bridgend	473 2 4
M. THOMAS, Llantrissant (accepted)	472 10 0
W. Thomas, Bridgend	365 0 0

## PYNEWYDD.

For Police Station, Pynewydd, Ogmore Valley, Glamorganshire. Mr. J. P. LAMBERT, Architect, Bridgend. Quantities by the Architect.

RICHARDS, Bridgend (accepted)

## PORTSMOUTH.

For Iron Railing to Enclose the Catholic Cathedral, Bishop's House and seminary, Portsmouth, for the Right Rev. Bishop Virtue. Mr. JOSEPH STANISLAUS HANSOM, F.R.I.B.A., 27 Alfred Place West, South Kensington, Architect. GODDARD & MASSEY, Nottingham (accepted)

## RAMSGATE.

For the Erection of Three Dwelling-houses and Shops, Queen Street, Ramsgate. Mr. E. L. ELGAR, Architect, Ramsgate.

T. Elgar	£1,700 0 0
Smith & Son	1,389 0 0
Bowman	1,382 0 0
Howe	1,299 0 0
Miller	1,230 0 0
White Bros.	1,168 0 0
J. Newby	1,148 10 0
Martin	1,100 0 0
Port	1,100 0 0
NEWBY BROS. (accepted)	989 10 0

## READING.

For Additions and Alterations, &c, Thehurst Board Schools, near Reading. Mr. F. W. ALBURY, F.R.I.B.A., Architect.

WERNHAM (accepted)

For Business Premises, Broad Street, Reading, for Messrs. Hoelias, Sons & Co. Messrs. BROWN & ALBURY, Architects.

KINGERLEE, Banbury, general work (accepted)	£2,400 0 0
TAMAR TERRA-COTTA COMPANY, for terra-cotta (accepted)	250 0 0



## SUNDERLAND.

For Building Stables, Workshops, &c., Sunderland. Mr. WM. MCBURN, jun., Architect, Fawcett Street, Sunderland. Quantities by the Architect.

Humble . . . . .	£1,182	0	0
Hirst & Sons . . . . .	1,100	0	0
Hildsey . . . . .	1,092	3	8
Douglass . . . . .	1,045	2	7
Swan & Co. (bricklayer and joiner only) . . . . .	991	0	0
Rule Bros. . . . .	972	18	0
Shaftoe . . . . .	964	5	0
Scott & Son . . . . .	951	14	8
D. & J. Ranken . . . . .	935	0	0
Hodgeson (accepted) . . . . .	920	0	0
Broad . . . . .	785	8	9

## SUTTON.

For the Erection of Ennerdale, Sutton, Surrey, for Mr. Mark Leader. Mr. HERBERT D. APPLETON, A.R.I.B.A., Architect, 157 Wool Exchange, E.C. Quantities by Mr. F. T. W. Miller, Guildhall Chambers, E.C.

Newland . . . . .	£1,195	0	0
Robinson . . . . .	1,115	0	9
W. C. Hards . . . . .	1,086	0	0
Smith . . . . .	1,077	0	0
Humphris . . . . .	1,010	0	0
G. Hards . . . . .	995	0	0
POTTER (accepted) . . . . .	970	0	0

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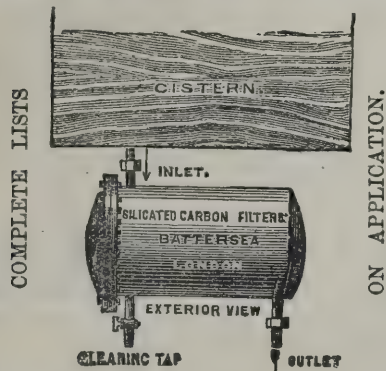
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## SOUTHGATE.

For the Erection and Completion of Two Pairs of Semi-  
detached Villas at Southgate, for Mrs. Caroline Deakin.  
Mr. ARTHUR W. SAVILLE, Architect, 99 Strand, W.C.  
Quantities supplied.

Jerrard . . . . .	£2,897	0	0
Cox . . . . .	2,685	0	0
Newby . . . . .	2,680	0	0
Smith . . . . .	2,609	0	0
Auley . . . . .	2,596	0	0
Shurmur . . . . .	2,574	0	0
Cook . . . . .	2,571	0	0
Spencer & Co. . . . .	2,485	0	0
Walker . . . . .	2,432	0	0
Ward & Lambie . . . . .	2,387	0	0
Howard . . . . .	2,382	10	0
Lambie . . . . .	2,267	0	0
Jackson & Todd . . . . .	2,255	0	0
ROYAL (accepted) . . . . .	2,076	0	0

## TILEHURST.

For Cottage at Tilehurst, near Reading, for Mr. Smith,  
Reading. Mr. JOHN J. SMITH, A.R.I.B.A., Architect,  
Swindon.

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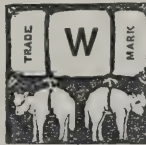
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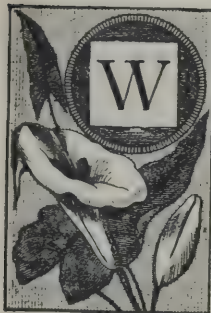
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# The Architect.

## THE EXTENSION OF ARCHITECTURAL EXAMINATIONS.



**W**HATEVER shortcomings may be complained of in the recent operations of the Institute of Architects, there are probably few of the better order of members who will not be disposed to approve and support the steps that have been taken in the direction of the development of the principle of an examination test. It is now a good many years—indeed four-and-twenty—since the beginning was made, when Mr. HAYTER LEWIS, one of the honorary secretaries at the time, as the mouthpiece of the Council, laid before a general meeting a scheme for the establishment of a committee to examine all applicants upon the several subjects involved in an architect's practice, and to bestow certificates, for what they might be worth, upon those who should be found proficient. It may perhaps surprise some of those who think the Institute has never had a will of its own to be told that this project, after due discussion, was formally rejected; not so much on principle, however, as in detail. The result was that the preparation of another scheme devolved upon Messrs. ASHPITEL, JOHN PAPWORTH, and KERR, who held their meetings, after the pleasant manner of those days, at the house of Mr. ASHPITEL, at Poet's Corner, the host supplying, in his ever genial way, that wisdom chiefly which is known as the ballast, and his younger colleagues that earnestness of contrivance which in such an enterprise is the requisite sail. In the end a complete programme was settled and approved, and "the Voluntary Architectural Examination" was duly inaugurated.

Two classes of certificates were granted, one for "Proficiency" and one for "Distinction"; but it was quite understood that the examination had no connection with anything like status in the Institute. In fact not a little jealousy was manifested, and there were not wanting elderly gentlemen especially who not only pooh-poohed the whole business in private as boy's play, but recognised it in public with a certain dubiously patronising air which was almost still more contemptuous. Professor DONALDSON himself, who was then *dux* indisputable, never liked the idea of examination in any form. One of his most emphatic sayings was that "the Institute is not an educational body." It must not be supposed, however, that this indicated his adoption of a lower standard than examination would signify; far from it. His standard, now very much lost sight of, was an exceedingly high one; so high, indeed, that his ideal of membership—a sort of impersonal collective membership—seemed to regard certificates of competency simply as an acknowledgment of possible incompetency, a thing not to be thought of. In other words, the Donaldsonian Institute was a supreme dilettante "Academy" of the Queen of Arts, where individuality put off its sandals at the door, and a representative aggregate of artistic, scientific, antiquarian, and literary culture found itself occupying the hall of assembly with a solemnity worthy of the grandest purposes. The mere schoolmaster was therefore left an immeasurably long way behind, and the trades-unionist was nowhere. But it is now plainly to be seen that the whole platform of the guild was changing; and, at any rate, the "Voluntary Architectural Examination" began fairly well. The fact, however, of its being so entirely voluntary must perhaps be acknowledged, strange as this may seem, to have been its strongest point.

Whether the credit of having passed this voluntary examination, even with "distinction," has ever helped anyone to take a better position in the profession, is a question which does not seem to be so readily answered in the affirmative as might be wished; but there can be no doubt that, during the interval that has elapsed since the date of its introduction, the demand for an examination test in English professional business generally has considerably advanced. A remarkable instance is afforded in the case of the "Surveyors' Institution." This is a society composed, on a very broad and elastic basis,

of persons who "survey," such as house agents, land agents, auctioneers, land surveyors, building surveyors, compensation surveyors, "architects and surveyors," and, in short, valuers of all sorts in that connection of business. Outsiders might well be excused for supposing that gentlemen of such a class, or classes, would prefer to avoid academical tests, and to rely entirely upon native shrewdness and experience; but the fact is that even here the genius of examination has so effectually taken possession that the Royal College of Physicians itself can scarcely show a more formidable programme than that of the Surveyors' Institution for the crucial investigation of a young man's understanding. The way, again, in which the Civil Service, and even the army itself, are now recruited in the person of "competition-wallahs," is a standing wonder to certain estimable classes of our youth. Nor can we even have a tooth drawn nowadays without being invited to think of a diploma. And if architecture, in whatever common acceptation of the term, is to keep pace with things in general, it may be said to be quite clear that the Institute must fall in with the rule. These are the days of examination all around, and perhaps it is best to inquire no further; sauce for the surveyor, to say nothing of the soldier and the dentist, must be sauce for the architect.

Accordingly, a couple of years ago, a new rule was introduced at the Institute, requiring all candidates for the preparatory, preliminary, or probationary stage of membership called Associateship to undergo an examination. It was understood that the trial need not be too severe at first, but the principle that some reasonable line of ignorance ought to be drawn for the sake of respectability was fully accepted, and it is quite apparent already that the days are gone by for the admission of young gentlemen willing to pay a few guineas for the use of academical initials on account of their being engaged in "the study of architecture" as pupils in the office of a dilapidation surveyor. There was one phenomenon, however, of a remarkable character, which came about incidentally in connection with the process of establishing this rule. For some time immediately before the date at which it had been arranged that the examination should be absolutely compulsory upon all comers, the applications of those who (not to put too fine a point upon it) disliked the idea of submitting themselves to invidious comparisons were delivered in such profusion that it might be said they took the Institute by storm; and the list of Associates, as it actually stands at this moment in order of seniority, consequently records the admission of a hundred at a time up to a certain point, and then a sudden drop to three or four. It remains to be seen in future years whether practical success in business is to attend upon the more cautious common sense of the many who were satisfied to acquire a status without earning it, or upon the more courageous enterprise of the few who preferred to win their spurs by open challenge.

The new principle has not yet had time to prove in the slightest degree how far it is calculated to raise the intellectual standard of architectural practice, which is of course the proper end in view; but it seems to have been sufficiently well received throughout the country to induce the Council to try at least one provincial examination, which was held in Glasgow a short time back; and, as was announced still more recently, the general body has seen fit to encourage an endeavour to hold similar examinations in the colonies also. All this seems quite worthy of approval; and indeed there are only two points which, so far, seem to call for remark. On the one hand it may be doubted whether the acceptance of compulsory examination in principle will really be so universal or so cordial as its promoters appear to hope; on the other hand it may be questioned also whether they are not already proceeding too fast.

A further proposal has been brought before the general body to the effect that the admission to the Fellowship itself, or full membership, shall now be barred by an examination. This is a much more important measure than any of the preceding, and, what makes it still more important, it is plainly announced that the Council are in the meantime holding over certain applications for the Fellowship, which, although based upon the statutory qualification of seven years' practice, seem to them to come from persons who are not of adequate age and experience. In other words, the supposed adoption by the profession at large of the principle of an examination test for Associates of the Institute has naturally raised, in the mind of the Council, the standard which they think the profession



must be inclined to set up for Fellows of the Institute; and it can scarcely be denied that this conclusion is so far a fair one. But still we may venture to hope that the greatest caution will be exercised, for there are many points of difficulty to be taken into consideration.

Perhaps the safest way might be to accept the proposal in principle, but in vague terms; in fact, to avoid purposely all details whatever. The precise plan proposed is practically to deny to all except Associates the right of nomination as Fellows. If the Associates were all examinees, this would have the effect, no doubt, of advancing the pretensions of the guild in a signal manner; but so very few of them are examinees in fact that this effect would obviously be altogether uncertain for many years to come. Might it not be better merely to introduce the rule that examination (in the most indefinite way possible) shall apply to the candidates for Fellowship, for the simple reason that, because the Associates are now subjected to examination, the Fellows cannot in honour evade it? Certainly, it is suggested that the Council shall have power to dispense with the examination in special cases; but such dispensations are invariably a cause of trouble, and it might answer better in all respects to leave the examiners entirely unfettered, and be content to affirm the principle.

### STUDIO NOTES.

**A**ROUND of the studios—which, thanks to the courtesy of artists, is one of the pleasures incident to this time of year—gives, on the whole, a cheering promise for the ensuing exhibitions at the Royal Academy and Grosvenor Gallery. Some strong men among the Forty have put forth their strength; others, who last year were not at their best, have made fresh effort, while outsiders of mark who send to either exhibition come bravely to the front.

It is good news to give that Mr. MILLAIS, R.A., will have six, possibly seven, pictures ready for exhibition during the season—not, however, all for either Academy or Grosvenor. Mr. WERTHEIMER has secured for his "MILLAIS Gallery" three out of the six, all pictures of children, to carry on the series which have won more present popularity for the artist than the manly portraiture or vivid subject compositions by which his name will ultimately live. *Little Miss Muffit*, turning round and letting her pipkin fall, frightened at the big spider, is certainly for charm of attitude one of the happiest creations of the artist. *The Mistletoe Gatherers*, an older girl seated on a rock in the snow, holding sprays of the sacred creeper and a big knife, has hardly the same qualities of execution; while, on the contrary, for colour, pose of the figure, and splendid brushwork *A Message from the Sea* is supreme. This title is given to the picture of a bright little girl, seated by the sea, reading the tattered letter which she has found enclosed in a bottle the waves have cast ashore. The theme is suggestive and set forth with artistic grace and freshness. *An Idyll* seems odd nomenclature for Mr. MILLAIS's subject picture for the Academy—a drummer-boy in brilliant regimentals seated on the grass beneath the trees, and delighting the ears of a group of young gipsy girls with the notes of his life. The painter has tackled the splendours of scarlet and gold, and the fresh tints of the copse wood, with his old audacity. A vigorous, half-length portrait of *Mr. Wilson*, in black velvet shooting-dress, gun under arm, crisp and firm work as possible, and the admirable profile, half-length, of *Mr. Irving*, the actor, for the Garrick Club, complete the list of Mr. MILLAIS's pictures, if we except a portrait of a lady in ivory coloured drapery against a gold background, which is as yet only laid in slightly. It is altogether refreshing to find the leading painter of our school in such complete mastery of his power, indulging in no *bravura*, but enjoying a difficulty, and bringing honest, strong work out of simple or complex material.

By right of presidential rank we should have taken first note of Sir FREDERICK LEIGHTON's chief contribution to the season's art, which, indeed, is an important effort. The looked-for composition, *Cymon and Iphigenia*, is on life scale, and proves fully assailable in claim on attention. IPHIGENIA, a form of sumptuous beauty, swathed in abundant creamy draperies, is stretched in sleep beneath the trees, her arms flung backward in *abandon* of repose, the lines of the torso and limbs large and studious of undulation. At her feet the

figures of a sleeping woman and a child are grouped in a peculiar and involved position; another woman is seated at the head of IPHIGENIA, in the shadow. CYMON, in a red cloak, looks upon the maiden, or should look, for somehow the artist appears in this figure to have ceased to take interest in his work, and the CYMON is a blot. In the background the moon rises above the sea, or the sun sinks—we must confess we are not quite sure which, a state of mental uncertainty arising from the entirely artificial lighting of the composition. The picture is another example of the artist's eclecticism of style which sometimes seems to bewilder not only the onlooker; it illustrates also a certain delight in beauty for beauty's sake, and a refined capacity for its expression, which are the painter's prerogatives. Some elegant portraits of children are among the pictures to be shown. Nearest to the work of Sir F. LEIGHTON in sympathy this year is perhaps that of Mr. CALDERON, R.A., whose small poetic picture, *The Birth of Venus*, who lies afloat on the azure waves, while the seagulls poise and flutter in curious joy over the radiant vision, has been secured for the Grosvenor Gallery. This may not be a Greek or a Renaissance version of the subject, but it is sufficiently refined and eminently brilliant in colour and execution. Two upright panels of foliage and figures, and an impressive figure of *Night* as a statuesque woman in dark draperies enthroned on a marble seat, a treatment reminiscent of DELAROCHE, are portions of a decorative scheme for a private mansion. Mr. ARMITAGE, R.A., who is ever faithful to traditions of high art—learnt in the school of the great French painter just named—has finished, under the title *Faith*, the gospel story of the woman who, amid the crowd, kissed the hem of CHRIST's garment that she might be healed. The picture is careful, with well-selected typical heads. But Mr. ARMITAGE has under hand a composition on heroic scale of the *Burial of a Christian Martyr*, whose body is let down by ropes into a catacomb chamber, which, for broad dignity of treatment and serious style, will be an eventful apparition amid the mundane realism of modern art. Elegant *genre* still finds exponent in Mr. MARCUS STONE, A.R.A., who in two upright compositions sets forth with soft, close *technique* and a palette of tender artificial tints, the *Quarrel* and *Reconciliation* of a husband and wife. In the last scene the pair have paused at the stile of the village churchyard, where the grave of the little one has moved their hearts, as in TENNYSON's ballad the legend runs, to "kiss again with tears." Mr. PHIL. MORRIS is in full swing of his narrative powers with the white ship returning from her voyage in tropical waters, and running into the green home harbour, while lads and lasses pace up the quay triumphantly to the greeting place. The canvas glows and quivers with light and wind. There are some charming portraits of children, especially a little damsel in white satin, poke bonnet and all, seated on the last step of the staircase. The execution of this is of the artist's best. A scene in a country churchyard, where *Joy and Sorrow* meet in the newly-christened infant borne joyfully past the grave of the little one gone home, is rather thin both in sentiment and workmanship. Mr. YEAMES, A.R.A., has a good little subject picture of the wits at the *Kit-cat Club Toasting Little Lady Mary Montague*, and some portraiture. Mr. EYRE CROWE, A.R.A., has been to Rouen for material, and brought back a lively scene at *The Fish Market*, and a capital study of the courtyard of the Convent de l'Aître, near St.-Maclou, once a burial-place, as the carved skulls and crossed bones on the old woodwork testify. The nun's little scholars are standing about, and the picture which was painted out of doors is full of light, and is of excellent execution. Mr. PETTIE, R.A., besides a portrait of a certain amateur orchid fancier of Birmingham, which is his best work of the year from the artistic point, has two clever subject pictures—*The Vigil* of a young soldier in the Middle Ages, whom the dawn finds still kneeling sword in hand before the altar of a Norman church, and a composition wherein a group of early Christian monks are standing on the outskirts of a wood at sunrise, to settle by the falling of the shadow of a rude cross where they will place the altar of their church that is to be. Both pictures, with much that is dramatically powerful and originally thought out, suffer by the unsatisfactory treatment of background, a certain unsubstantiality, and from the peculiar scratchiness of the artist's touch. The face of the knight of *The Vigil* is a fine study of expression; though taken from a manly model, the painter says that for the fervent rapture of the eyes he had to paint from a woman. The colour of the other



picture is rather hot with yellow-browns; but the management of the sudden sunrise light flashing on eager faces and trembling into the recesses of the wood is most amusing.

Portraiture is safe in the hands of those already named, to whom must be added the name of the portrait-painter *par excellence*, Mr. F. HOLL, R.A., who has an amazing array of good work. None is better than the bust portrait of his late father, *Mr. Holl, the Engraver*, a three-quarter face, with fine turn of the dark blue eye, and free treatment of hair. The Temple barristers ought to be pleased with their full-length of *H.R.H. The Prince of Wales*, which is admirable in style. A fancy portrait of a little girl, *The Soldier's Daughter*, holding her father's sword across her knee, is also capital in the firm, broad brushwork. Mr. RUDOLPH LEHMANN has been very happy with his sitter, *Mr. Spencer Wells*, the eminent surgeon. A keen, strong personality is here, with the eye of acute observation and the well-knit handsome hand of the manipulator. Mr. WELLS wears the robes of his faculty—black, with red lining—that shows here and there and helps to give colour.

Our old friend, Mr. MARKS, R.A., is one of the few painters who keeps at the level of the excellence he has attained to; of none can one feel so sure in his own *métier*. So this year in the large picture of two adjutant storks, looking for all the world like the *Two Foolish Justices* which their Shakespearian title calls them, in the quiet couple of WALTON's disciples seated chatting outside *The Angler's Rest* over some piscatorial point of difference, or in the inimitable study of an old *Entomologist* manipulating his dried insects, Mr. MARKS is, as always, quietly racy in humour, firm in drawing, solid, and even in *technique*. After this kind of painting the slash and dash of that clever and audacious painter, Mr. HERKOMER, A.R.A., whether in subject pictures or portraiture, seems, to say the least, uncontrolled. But of his work we will defer speaking, as we must also of Mr. BURGESS's vivacious *Spanish Wedding*, which is likely to be one of the most "drawing" pictures of the year. The public like a story, and it is to be hoped that from interest in the drama of the fine composition by Mr. H. SCHMALZ, *Too Late*, they will not pass over the extreme care which he has put into it. A girl lies dead in her white shroud near the open window of an ancient British stronghold; the dawnlight falls on her still form, on the lilies on her couch, the rush-strewn floor, and the painted and inlaid furniture of the chamber; falls on the mourning figure of an old man and a young boy. Out of the shadow into the faint light comes the eager armed figure of the girl's Roman husband, returned with his company of soldiers from the wars, "too late" to greet a living wife. Through the window can be seen a landscape of mountain and wood, mysterious in the early morning, while on distant walls of the castle stand figures dark against the sky, kindling watch fires. The picture belongs to historic romance, conceived in the spirit of German art of the romance school; in a colouring of subdued contrasts and a certain approach to stage effect the same affinities can be traced. But Mr. SCHMALZ is for all that original in his treatment, and cannot be praised too warmly for his thoroughness and artistic handling. Among outsiders few men show more consistent advance from year to year.

We have left little room for notes on the landscape, and, as it is in the fashion to say, the seascape artists. Mr. PARSONS has two large studies of autumn evenings over the windings of SHAKESPEARE'S Avon river; the one grey, rainy, gusty, with fretful wind that buffets the brown-thorn trees on a knoll above the valley, ruddied with winter berries; the other, calm, golden, with lustrous clouds lying dreamily above the wooded level of the hill. Mr. HENRY MOORE has painted again, as no one can better, or shall we say so well, a heaving sapphire-blue sea *Off the Lizard*, under a sky still electric with thunder-clouds. There is closer finish in this picture than Mr. MOORE often gives, for though careful in drawing, he is for effects and tone inclined to rely upon a too crude state of impasto. *The White Calm* of this year would be better for closer kneading, though in quality of gradation it is excellent. A study of the seaweed harvest on the Worthing coast by sunset is for the Grosvenor Gallery, and likely to turn out a fine picture. The newly-elected associate, Mr. COLIN HUNTER, has done much to silence detractors by a group of spirited sea and coast pictures. Of these the best is *Herring Market at Sea*, an admirable study of calm, restless, and limpid water, thus broken into various surface by wind and current, of fishing smacks and steam sloops, and a windy sky. There is much

less of the knife in the handling, and the colour, though still harsh, is cleaner. Another picture of green tide-waves rushing in between reaches of brown boulders is masterly in drawing and brilliantly luminous.

Thus far we may introduce our readers to the May exhibitions beforehand, for the fatal words "doubtful" and "rejected" will hardly touch the pictures we have named. By all accounts they have had to sound over even more than usually good pictures crowded out. The landscape artists especially, with ambitious scale and excellent work, have wrung the hearts of the selecting committee, forced to be inexorable.

## THE BUILDING TRADES EXHIBITION AT THE AGRICULTURAL HALL.

IN drawing attention to the few remaining exhibits that we are desirous to mention in connection with this late exhibition, some remarks on its general character will not be without interest. In the opinion of many, a crisis has arrived in the fortunes of this annual display. It is generally admitted that of the five exhibitions that have been held that of last year was the most successful, whatever point of view we regard it from. It has been urged that, although the entries this year rather exceeded those of last, they were of a more mixed character, and not so much in consonance with the great industries for which it was promoted, and they argue from this that the interest in the exhibition is declining. While admitting some of these deductions, we are not disposed to take so pessimistic a view of the situation. The present year has been an exceptional one, and such as is not likely to occur again for some time to come. We allude, of course, to the attractions of the International Health Exhibition on the eve of being opened at South Kensington, and we may repeat the remarks that we made in our first report here, that in being enabled to keep up his entries to anything like their former standard, Mr. SHRAPNEL scored an unequivocal success. But in looking at the Exhibition that has just closed, notwithstanding all the changes that appeared in the exhibitors, we consider it was a fair representative display. If some of the exhibits were not so large (which, perhaps, is not a disadvantage) the owners took care to display the salient features in their manufactures, and it cannot be denied that building materials were well represented. If we turn to decoration, the most fastidious could scarcely have found fault with the display, and there appears a decided tendency on the part of manufacturers of such to patronise the Building Trades Exhibition; and we believe we are correct in hazarding the assertion that there was more of it this year than on any previous occasion.

Amongst those not yet mentioned we may call attention to the exhibit of tiles made by the noted firm of JOSEPH WEDGWOOD & SONS, Etruria, Stoke-on-Trent, who have recently entered the lists as exhibitors at various exhibitions. As emanating from such a firm, we may be sure that everything they exhibited bore the impress of merit. A finished production, some nine feet high, *The Widow's Mite*, was a veritable work of art. The background of this was composed of tiles made by a new impressed process, which obviates the necessity of expensive moulds, and dyes the colour a low-toned green, with a slightly-raised pattern upon it. The life-sized figure of the woman and the drapery, with a boy clinging to her, was in white; the hand outstretched with a coin in it. The words underneath, "Safe bind, safe find," may be taken exception to by some, seeing that they have become somewhat hackneyed by certain people for advertising purposes. This panel has been purchased for the Bristol Savings Bank, and is not an inappropriate ornament for such a place. A London firm—Messrs. MILLER, LITTLE & Co., 44 Devonshire Street, W., were also exhibitors of tiles and other decorative work. The former, which were all hand-painted, were not only painted, but fired in London, and they one and all had an artistic touch with them; some of the continuous patterns, such as the iris and lily, apple-blossom, &c., in panels, evinced much merit. Another exhibit in tiles, not yet mentioned, was the CRYSTAL PORCELAIN POTTERY COMPANY, St. Bride Street, E.C., and Colridge, Stoke-on-Trent. These productions had a remarkably fine gloss upon them, as if a coating of glass had really been applied to them, and one or two of the self-colours shown were a little out of the



ordinary "run." The makers claim that they are all vitreous; and unglazed ones were exhibited for damp-resisting floor and wall coverings, the patterns generally being very good, and the colours harmoniously worked in. Another class of decoration that appears anxious to make itself a home at the Building Exhibition is that of painted and stained glass. In this department Messrs. A. L. MOORE & Co., Southampton Row, Russell Square, introduced us to some choice *morceaux* in ecclesiastical subjects, and some equally good designs for domestic purposes. There was an absence of all "glare" in the treatment of the subjects, which were evidently the work of practised hands. Mr. CHARLES EVANS, 20 Warwick Street, Regent Street, who is not only a stained-glass artist, but art tile painter and mural decorator, contributed some excellent specimens of his work. These also included ecclesiastical and domestic designs, subjects from "Elaine," "Evangeline," &c., being well conceived. In addition to the glass were some attractive specimens of L'HEUREUX's patent marble engraving for church and domestic decoration, a company of which Mr. EVANS is managing director. Even manufacturers of terra-cotta figures and ornaments are now seeking publicity here, and the Ipsen Terra-Cotta Fine Art Pottery, Copenhagen, represented by Messrs. ARUP BROTHERS, of Bond Street, may well cause the home makers to look well to their laurels. In artistic treatment the statuettes, reliefs, &c., are the works of men of experience, and some plaques after "Thorwaldsen" in two colours were much admired. In colour the Swedish clay is not quite so deep or of so warm a tint, and it is the only objection if it amounts to as much that we can find with it. But the Torquay Terra-Cotta Company were well represented by their agents, C. B. PARE & Co., London Wall, and sent an admirable collection of the numerous articles in which they work their plastic material, some very pretty specimens being amongst them. The statuary comprised many well-known classic names, in which the female semi-nude abounded. The painted work was also commendable; but we prefer the clay without the addition of any pigment. Furniture, too, which may fairly be classed as decoration, always finds a few exponents; and in this instance was well represented by Messrs. JINKS & WOOD, Holborn Viaduct, who supplemented their own manufactures with some examples of wall decoration in Japanese and other papers, &c. A bay was devoted to both dining and drawing-room furniture, the former containing, amongst other articles, a splendid sideboard in very dark mahogany, and choicely carved in the style of French Renaissance. An old veteran in the form of a Chippendale chair, said to be about 170 years old, appeared as a somewhat amusing contrast to the newly-finished work around it. The drawing-room furniture was mostly white, the coverings approaching the crushed strawberry colour. A handsome Shératon cabinet formed a good background. A quaint addition to this exhibit consisted of a few specimens of Persian *faïence* framed as pictures in relief, remarkable more because they were the work of such a distant clime than from any real beauty or artistic merit. As a cheap mode of producing effective decoration in imitation of stained glass may be mentioned the patent "glacier" window decorations of Messrs. PERRY & Co., of the Holborn Viaduct. It may be urged that it is debasing to lower the art of glass-staining in such a manner; but we live in an age in which we are called upon to place within the reach of the masses all that will improve their tastes or raise them to a higher appreciation of the beautiful, and as we cannot decorate their houses with painted glass, although we have gone a great step forward in introducing leaded panes into a cheaper class of residence, the next best thing we can offer them is the "glacier" decoration, a kind of gelatinous picture that they can affix themselves without removing the glass, and at a cost that is scarcely worth notice. Some of the designs are by no means bad, and if not looked too closely into have a very good effect.

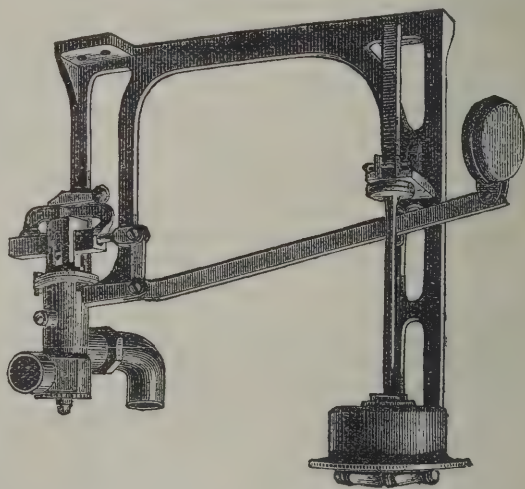
Turning to metal work as applied to interior decoration, Mr. ALFRED NEWMAN, of Maddox Street, Regent Street, carried us back to Mediæval times when we entered his bay, surrounded as it was with almost everything required for interior use in hammered iron, no two alike, his workmen having *carte blanche* to make free use of their taste—which they do not appear to be slow to avail themselves of. We here saw the productions of the smith as in ancient times, and some beautiful specimens of the handicraft amongst them. A commanding feature was a fine wrought-iron column, containing five gas-lamps, one of a series of six now making for the Duke of

WESTMINSTER for Eaton Hall, in which the arms of the family were well incorporated in different parts.

Messrs. CAPPER, SON & Co., Ingram Court, Fenchurch Street, had a good exhibit, comprising some ingenious secret urinals and lavatories for office use, a fine display of lavatory earthenware, and PEARSON's patent "twin basin" water-closets, that have been fully described in *The Architect* on prior occasions.

A general collection of gas heating and lighting stoves, and suitable culinary vessels for the same, was made by Messrs. H. & C. DAVIS & Co., Camberwell New Road. There was, however, no novelty amongst the exhibits, but the firm's Metropolitan Gas Kitchener has made rapid progress in public favour, many of the leading gas companies having taken it up, and adopted the system of letting them out on hire at a small annual rental, which has been the means of bringing them largely into use.

One of the best assortments of general sanitary appliances was made by Messrs. BOULDING & SONS, of South Molton Street, W., one of the oldest London firms in this industry. The exhibit comprised some remarkable specimens of lead pipe bending without breakage, their Simplex, Argosy, and Grosvenor valve-closets, BANNER's patent earthenware closets, MACGILL's patent urinals, baths, lavatories, slop-sinks, &c., and a good collection of plumber's fittings. Their patent water-waste preventer flushing cistern, on the syphon principle, was also shown, which is a well-made and reliable appliance. But the greatest novelty connected with closet-work consisted of TRUSS's patent water-waste preventing valve, which we illustrate, invented to dispense with the supply or flush cistern. This is fixed under the seat, as shown in the illustration, and its salient points are that it



can be attached to any existing closet and only requires one plumber's joint to fix it. It dispenses with all valves, bellows, &c., it does away with the large charges for fixing water-waste preventers, &c., and cannot well be affected by frost. It consists of a simple direct-acting valve, which, when opened, causes a partial vacuum, eventually closed by the force of water passing by it, after the orthodox quantity of water has passed through. The length of time the handle is held up does not affect the quantity discharged, which is always the same, and the after-flush is also secured. It works equally well under high or low pressure, and we understand has been approved of by every water company to whom it has been shown. It will undoubtedly prove a valuable addition to our stock of kindred appliances.

Messrs. J. ARTHUR YOUNG & Co., 8 Victoria Chambers, Westminster, are well known as supplying stable fittings of good quality at moderate prices, and exhibited at their stand some good specimens of their work, comprising stall divisions, complete with ramp and middle rail, wrought-iron ventilating panel and bottom sill, manger fittings, consisting of cast-iron manger and waterpot and wrought-iron hayrack, plain or enamelled, for stall or loose box, and other minor accessories.

Horticultural work was represented chiefly by Messrs. MESSENGER & Co., Loughborough, and Messrs. RICHARDSON & Co., Darlington. The former firm have attained notoriety for the "Loughborough" boiler, which is made in six sizes, capable of heating from 100 feet to 1,300 feet of 2-inch pipe, and is one of the simplest and most easily managed we know of.



Their amateur greenhouses are worthy of note. They are made in a number of sizes, but are all so designed and made in such parts as to facilitate their ready transport any distance. The latter firm's exhibit consisted chiefly of models for houses and conservatories of very superior construction, and displayed considerable skill both in design and execution. They also showed the "Amateur's" and "Ivanhoe" independent boilers, and sundry valves, sun blinds, and other fittings. A new system of glazing, either for greenhouses or for other roofs, was shown here for the first time by MESSRS. DRUMMOND & LINDSAY, of Edinburgh. It possesses unique advantages, not the least being its very solid, substantial, and durable character. Since its introduction it has been applied to several roofs of great span and in exposed positions in the north, and has given great satisfaction. Zinc tubular pieces of metal are fixed on the edges of the panes by means of a specially-prepared putty that will not harden. They have the effect of strengthening the glass, and perfectly prevent rain or water penetrating to the edges of the glass in the stormiest weather.

Among the firms sending sanitary appliances we have not as yet reverted to are MESSRS. GEORGE FARMILOE & SONS, Smithfield, E.C., and Mr. JOHN SMEATON, Ludgate Circus, E.C. MESSRS. FARMILOE sent a representative collection of their various goods, consisting of the famous "Du Bois" drawn lead traps, patent American gun-metal valves for hot or cold water, and a good show of baths, lavatories, closets, and the numerous accessories of the plumber's craft. The "Eos" water-closet, recently introduced by this firm, does them great credit. It is made in earthenware in one piece, is valveless, and possesses a good syphon with a cap for inspection, while it is supplied at such a price that it can be fitted in houses of the smallest class. Mr. JOHN SMEATON's exhibit was principally confined to bath arrangements and valves, patent hospital baths, lavatories, his patent cast lead Eclipse traps, and the Bower sewer-gas trap.

An exhibit of bricks that must not be passed by was that contributed by Mr. GEORGE WRIGHT, East Acton Brickworks, Uxbridge Road, W. An ornamental and attractive structure displayed some well-designed and cleanly-made moulded bricks, as well as showing the quality of the rubbers and cutters. At this stand was also a very complete assortment of every description of moulded and facing bricks and other cognate material. In this category, not yet mentioned, was the WOOLPIT BRICK AND TILE COMPANY, 57 Moorgate Street, E.C., and Woolpit, Suffolk, who likewise sent a good general collection, but they made a special feature of their red-and-white Suffolk facing bricks, which they claim stand second to none sent to the London market, and they, at any rate, appear to have every care and attention bestowed upon their manufacture, and the richness of the colour of the red ones is a noteworthy fact.

As we have already mentioned, in a previous issue, building stone is not as well represented as it has been on former occasions, yet there are firms here this year who have not occupied space before. Of these, Mr. M. COLCHESTER W-EMYSS, The Wilderness, Mitcheldean, Gloucestershire, sent some praiseworthy specimens from those quarries, as well as an assortment of ornamental vases and other terracotta goods; and MESSRS. THOS. FREE & SONS, Naphill, High Wycombe, Bucks, sent various classes of work in the stone from their neighbourhood, and also good examples of Bristol blue Pennant stone for building headstones, tombs, bordering, kerbing, pitching, &c., they having lately commenced working quarries in the latter neighbourhood.

Mr. HY. HALL, 19 Doughty Street, Mecklenburgh Square, W.C., showed his patent hanging tiles, for facing old or new walls and partitions, &c. The novelty of these tiles consists in the method adopted for fixing them, which effectually prevents any liability of their falling off. They are secured by nails to battens or rough boarding, and on the face of walls by nails driven into the joints of brickwork, being made to course with brickwork. They can be had in a variety of patterns and colours, 9 inches by 3 inches, or 6 inches by 6 inches, and are also supplied in common redware.

The exhibit of Mr. JOHN DEAN, of Bootle, Liverpool, and other addresses, gives a very good idea of the large and varied purposes for which slate is applicable, and in fact is generally used. It comprises an assortment of roofing slates in the newest designs and in all qualities, including the blue, green, purple, and red varieties from Moelferna, Westmoreland, and other noted quarries; specimens of plain and enamelled slate

slabs for shelves, &c., in different thicknesses; chimneypieces and work such as is used for cisterns and urinals.

The UNIVERSAL VENTILATING COMPANY, Lewisham Bridge, S.E., who some time since purchased the patents of STEVEN'S "Exhaust" ventilators and chimney-pots, made a very creditable display of these goods, and exhibited some well designed ventilators for good class buildings, churches, schools, &c. Some were of a very ornate character, and would add to rather than detract from the appearance of any structure, while the valuable exhaust properties of the patent are in no way interfered with. They are also made in all prices, from a few shillings upwards.

MESSRS. F. WILSON & Co., Stowmarket, Suffolk, showed their various compositions for removing, cleansing, or washing old paint, gilt mouldings, furniture, papier-maché, &c. Of these the most legitimate in a Building Exhibition is the one connected with paint, varnish, &c. It is an alkaline composition, and merely requires to be smeared over the surface of the paint required to be removed, and such is its dissolving power that in a few moments the oldest and most hardened body of paint is rendered soft, so as to be easily scraped off with a palette-knife. Considerably diluted, it is also useful for washing or cleansing painted surfaces.

MESSRS. J. J. THOMAS & Co., 87 Queen Victoria Street, and Edgware Road, made their usual interesting display of wire work, which now forms such an important feature in the decoration alike of private gardens and pleasure grounds. Their exhibit was superior to anything else of the kind in the building, and comprised garden-seats, rose temples, garden arches, wire trellis, and suspending baskets, all being very pretty and tastefully designed. The heavier class of goods, as fencing, gates, cattle hurdles, water-barrows, pea-guards, and builder's sieves, screens, &c., were well represented, as also were the lighter description, which include flower-stands, birdcages, and aviaries. These latter were shown in a variety of sizes and prices to suit all requirements.

MESSRS. E. ALDOUS & SON, sanitary and ventilating engineers, 205 Romford Street, Stratford, E., sent a good collection of their patent ventilators. This ventilator possesses some very unique and salient features, not the least important of which is that by means of one exhaust every room in a house may be ventilated. Another advantage it possesses is that it is quite automatic in action, but in no way depending on the atmosphere, as a strong wind does not facilitate nor a complete calm retard its effect, while it is quite proof against draught.

The machinery exhibited by MESSRS. F. W. REYNOLDS & Co., Edward Street, Blackfriars Road, S.E., was of a thoroughly representative character, as it comprised engines, mortar-mills, saw-benches, band-saw and mortising machines, planing and moulding machinery, and, in fact, every description of machinery used by builders, contractors, coach-builders, and cabinet-makers. It was all more or less in action, and appeared to cause considerable interest, and claimed the attention of practical men, and not only of sightseers.

Last, but by no means least in importance, is a new invention for securing the knobs on the spindles of locks, exhibited by Mr. T. H. P. DENNIS, of Chelmsford, a gentleman who has contributed many useful features in connection with domestic and engineering appliances during his business career. There is, we presume, no housekeeper who has not at times experienced the annoyance of knobs becoming loose and falling off, and, after they have apparently been securely refixed, indulging in the same vexing playfulness. Mr. DENNIS ignores all side-screws and other means hitherto adopted, but drills and countersinks a small hole in the centre of his knob, tapping his spindle some distance down at the same time. When the knob is put on, a long screw of small circumference, with a close worm, is screwed into the spindle until it rests on a level with the knob in its countersunk opening, presenting a perfectly flat surface, and rendering the falling off of the knob, or its even becoming loose, an absolute impossibility. It can of course be applied to all kinds, whether metal, wood, or china; in the case of the last an ornamental finish is supplied for the centre.

We have now mentioned all the exhibits that we consider it necessary to call attention to, and we may add in conclusion that, notwithstanding the differences of opinion that exist, the management have received ample promises of support to warrant them in intimating that the Building Trades Exhibition will be repeated at a corresponding date in the year 1885.



## NOTES AND COMMENTS.

THE competition for the Dublin Museum has been decided, Messrs. THOMAS N. DEANE & SON having been successful. In the second competition Mr. THOMAS DREW, and Messrs. MILLAR & SYMES of Dublin, and Messrs. HOLMES & HORN-BLOWER of Liverpool, with Mr. WILLIAMS of Bangor, also took part. There will be few who will not be pleased to find that at length an Irish design has won the prize. The Committee who examined the drawings consisted of Lord POWERSCOURT, Sir ROBERT KANE, The Lord Mayor of Dublin, Colonel NOBLE, R.E., Colonel FESTING, R.E., Mr. JOHN MCCURDY, and Major PARKER, R.E. It was evident to anyone who read between the lines of the speech delivered by Lord POWERSCOURT, which appeared in *The Architect* last week, that the English designs had no chance of success. It is estimated that the new building will cost 109,000*l.*, and pressure will be brought to bear on the authorities to have the works commenced if practicable during the ensuing summer. The Committee have suggested some slight alterations in the accepted design.

THERE are so few architectural sculptors in Great Britain that general regret must be expressed at the death of WILLIAM MOSSMAN, of Glasgow. He was one of three brothers who gained repute by their sculpture. WILLIAM MOSSMAN was one of the able assistants of the late WILLIAM THOMAS, and was employed by him on the carving at the Houses of Parliament. Afterwards he was engaged by WILLIAM BEHNES and Baron MAROCHETTI. On returning to the North, Mr. MOSSMAN was able to obtain several commissions, and he loyally co-operated with the architects of Glasgow. Among the works he executed were the powerful atlantes which flank the doorway of the Bank of Scotland, and the panels of the Scottish Amicable Assurance Company's office. Mr. MOSSMAN was also an expert modeller of medallion portraits in wax. For some years he taught the sculpture class in the Glasgow School of Design.

THE jerry builder has had little mercy of late days; but it is now proposed to make him also suffer when he leaves this world. At a meeting which was held in the Congregational Hall one of the clergymen who spoke said that he had driven a member of his congregation out of his church simply for belonging to that obnoxious class of builders. Such men, he added, "might be described as predestined villains whose damnation was just." But while giving the builder his deserts, would it not be well if zealous people like the clergyman had the courage to attack those for whom the jerry builder is merely an agent—the men who make large profits by his misdeeds?

THE Newcastle-on-Tyne Natural History Society has obtained the valuable collection of oil-paintings, water-colour drawings, sketches, and woodcuts belonging to THOMAS BEWICK, which was bequeathed by his daughter. It contains five painted portraits of BEWICK. The drawings are mainly of birds; and the woodcuts, of which there are 2,445 examples, are illustrations printed from BEWICK's cuts. The gift is appropriate. THOMAS BEWICK was one of the most accurate observers of animals, and his life was closely connected with the city of Newcastle. If the Committee of the Society will give facilities to others besides members for seeing the bequest, they will fulfil the desire of the testatrix.

THE new set of twelve large photographs issued by the useful Society for Photographing Relics of Old London are mainly suggestive of old-fashioned City dwellings. They are all taken from good points of view, and are surprisingly cheap. The first is the second-hand bookseller's shop in Fleet Street, near St. Dunstan's Church, and which is supposed to have been the residence of DRAYTON, the poet. The windows have been altered, but enough remains to suggest what Fleet Street was like before the Great Fire. Two photographs are devoted to the "Old Bell" in Holborn, which is one of a few relics of the days of coaches, waggons, and highwaymen. The tower of St. Giles, Cripplegate, with the houses and gates in front, form the subject of a fourth plate. The next is of the timber house which stood in Fore Street, at the corner of Milton (Grub) Street, and which might have belonged to a country in which no other material but timber was available. Three excellent examples are given of eighteenth-century work in Great Winchester Street and Austin Friars, and a couple of picturesque doorways of the

same period, from Laurence Pountney Hill. The remaining photographs are taken from College Street and College Hill, and the buildings shown may have been designed by WREN. It is gratifying to find that Mr. A. MARKS's honorary exertions continue to meet with success. The Society has now reached its tenth year, and it deserves to have a long career.

THE public has not heard the last of the fall of the chimney at Bradford. The catastrophe has yet to give work to the lawyers. An action has been entered by a man who lost two of his daughters, but a difficulty arises in respect of costs. The plaintiff having only thirty-five shillings a week, with a family to support out of it, has pleaded that he is unable to make the requisite deposit before delivering interrogatories. It is alleged that the chimney was defective, but the owners of the mill deny this; and it will be, of course, very expensive to secure the evidence of experts in support of the allegation. Interrogatories are therefore necessary. It is said that subscriptions have been obtained in Bradford in support of actions by sufferers, and, with this statement before the Court, Mr. Justice FIELD has declined to dispense with the deposit for costs. At the inquest a great deal of evidence was heard before Lieutenant-Colonel SEDDON, the Government Commissioner, but it will not necessarily avail at the hearing of the cases. If one case succeeds many others will follow.

MR. WILLIAM MORRIS presided at the opening of the annual Whitechapel Exhibition of pictures on Tuesday, and which is one of the civilising agencies employed by the rector of St. Jude's. The exhibition contains over two hundred pictures, and will be kept open for about a fortnight. On Sundays the room is not closed. Mr. MORRIS expressed approval of the opening of galleries on Sundays. "The existence of the idea that only those of high birth or wealth could enjoy art would," he said, "destroy art altogether; so that it was not a question whether we should have art for the few and not for the many, but whether we should have art for the many or not at all. The art property of the working men had in some manner been taken from them, and shut up in the public galleries on the only day on which they could have an opportunity of seeing it." The experience in Whitechapel has been an argument in support of the opening of all museums and galleries.

THERE appears to be some difficulty felt by judges in exercising the powers conferred by LORD CAIRNS's Act (21 & 22 Vic. c. 27) of awarding damages when a plaintiff in a light and air case has been successful. No settled rule has been laid down, but it is understood that, whenever the injury does not render property useless, the Court can exercise its discretion and give damages. In a case which was lately tried before Mr. JUSTICE PEARSON the plaintiff owned four small cottages, let out to weekly tenants, at the south end of a narrow court, which was entered at the north end by a narrow covered passage. At the north end there had been buildings about thirty feet high, and on the site of them the defendant proposed to erect buildings forty-six feet high. The plaintiff's property, if sold, was supposed to have been worth 1,000*l.*, and he said that it was diminished in value about one-third or one-fourth; while the defendant's witnesses said that at most the letting value would be diminished one-tenth. Instead of granting an injunction to pull down defendant's buildings, Mr. JUSTICE PEARSON awarded a sum of 150*l.* to the plaintiff. This judgment will be a valuable precedent, and will go far to remove the personal animus which often inspires actions.

AN inquiry was lately held, by order of the Local Government Board, into the merits of the scheme of the Lower Thames Valley Drainage Board. It was proposed to purchase land on the river-side between Mortlake and Kew Bridge, and to collect on it the whole of the sewage of the Lower Thames Valley, which would be dealt with by precipitation, the effluent liquid sewage being poured into the river, and the residuum employed as manure. The scheme was opposed by the Duke of DEVONSHIRE, who owns property on the opposite side of the river, and by the local authorities of Chiswick. Mr. J. T. HARRISON has now reported in favour of the scheme, and the Local Government Board can grant a provisional order; but it is understood that the opposition will be continued, in order to prevent the authorisation of the grant by Parliament.









Felinfoel Vicarage: Carmarthenshire.

J BUCKLEY WILSON, A.R.I.B.A., ARCHT.  
SWANSEA.



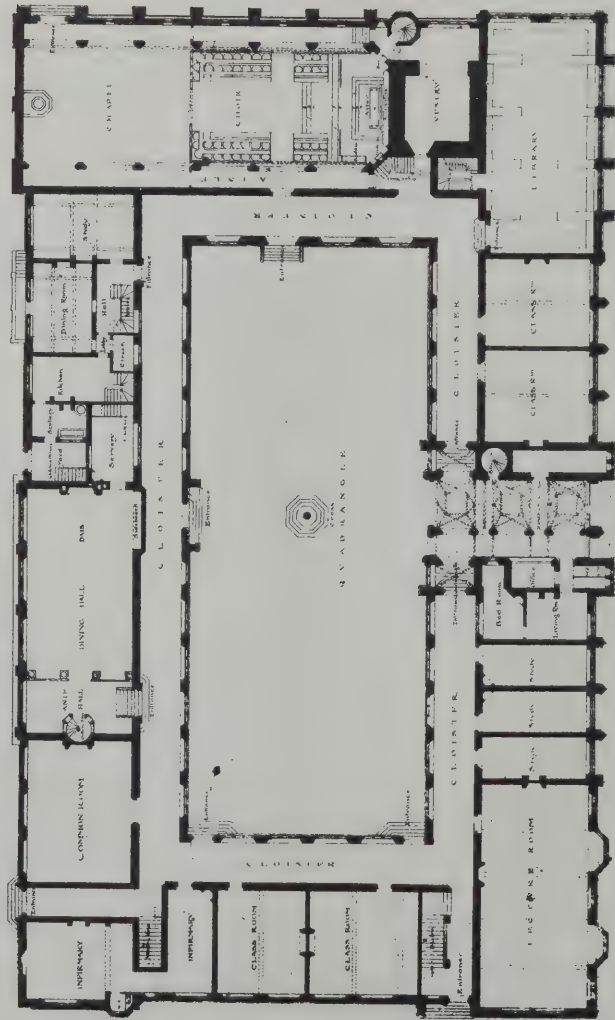
NEW BREWERY STORES: BRADFORD, WILT.

WEAVER & ADY, ARCHITECTS.  
BRADFORD & BRISTOL.

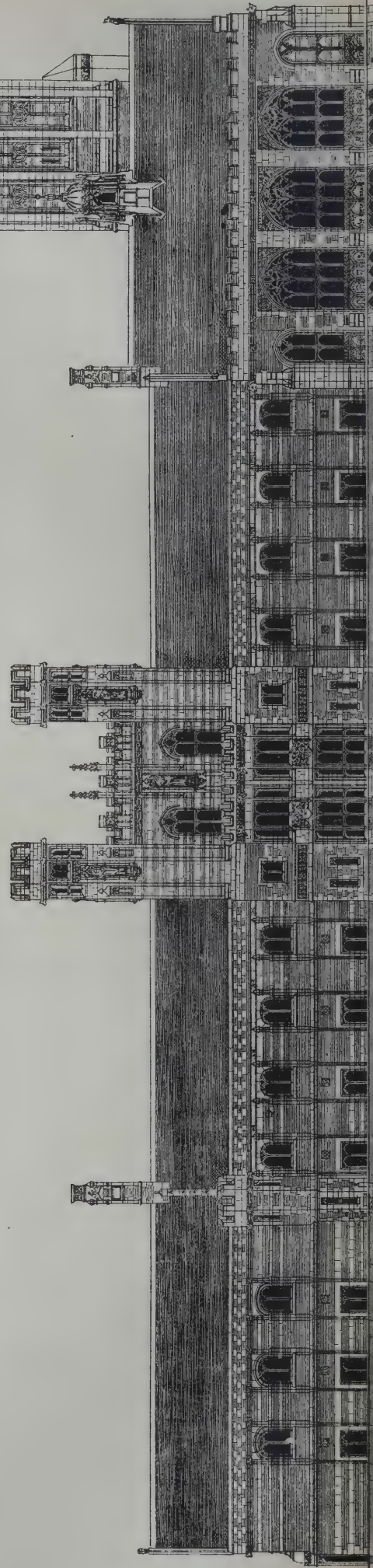




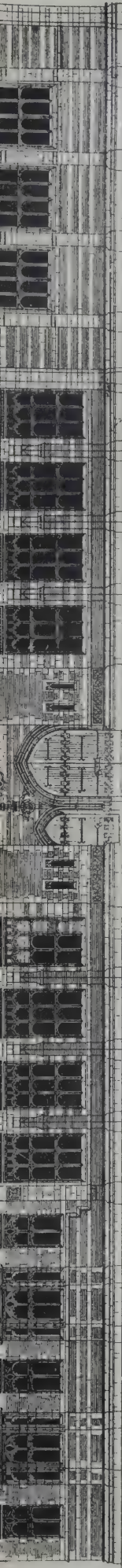




GROUND PLAN.





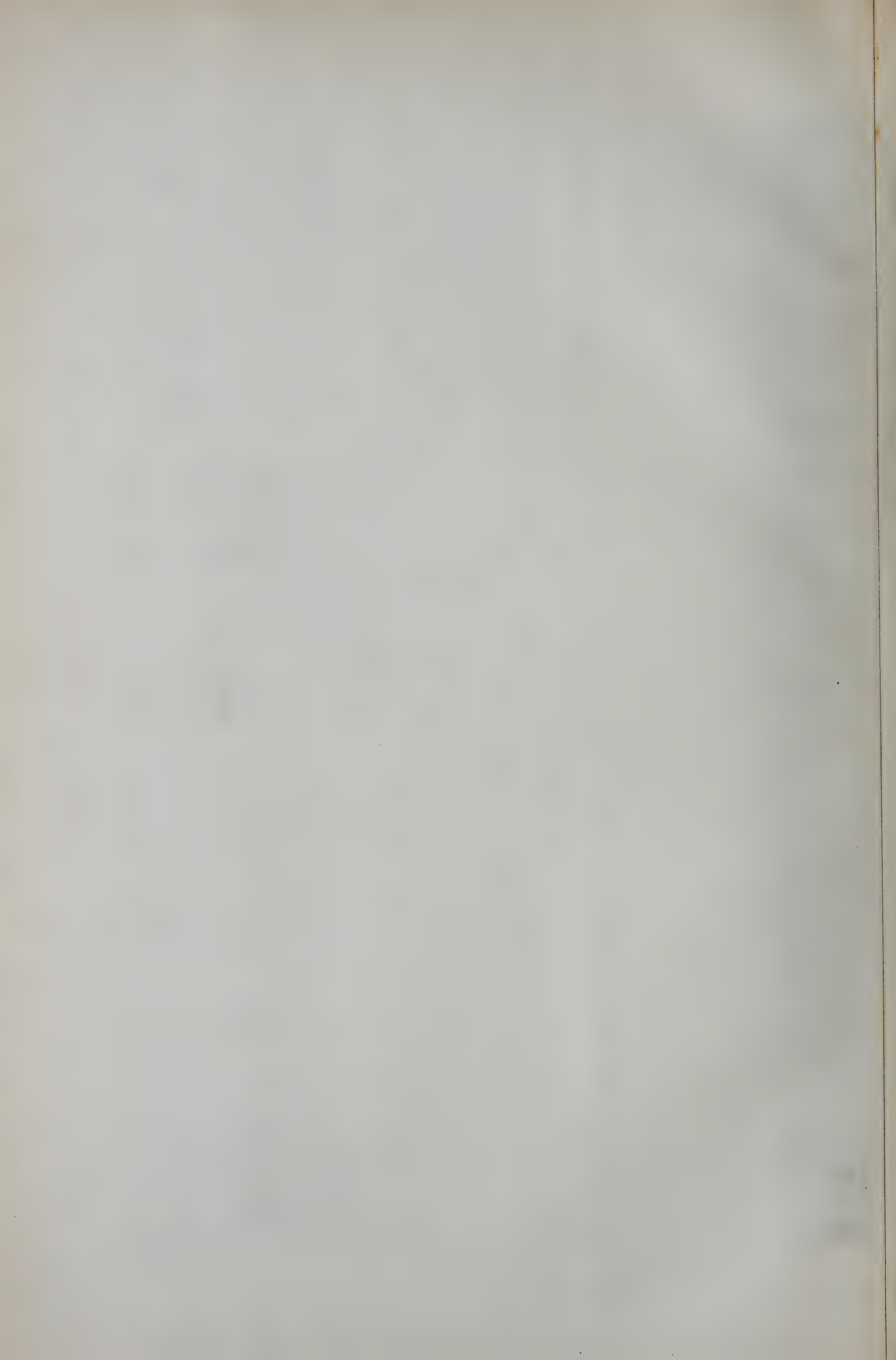


FRONT ELEVATION.



SIDE ELEVATION.













HIBERNIAN BANK, CO.

THOMAS DREW



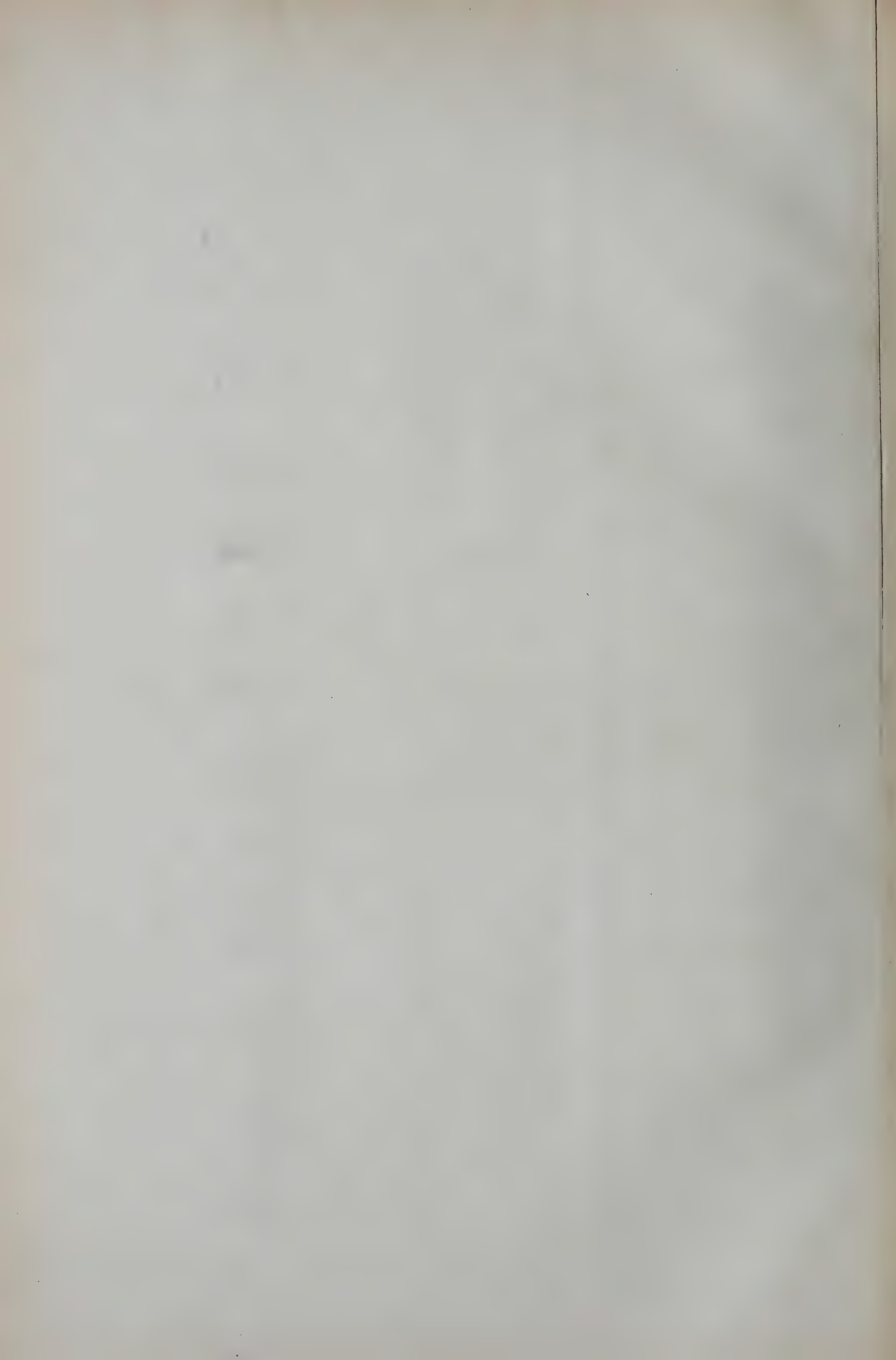
April 12<sup>th</sup> 1884.



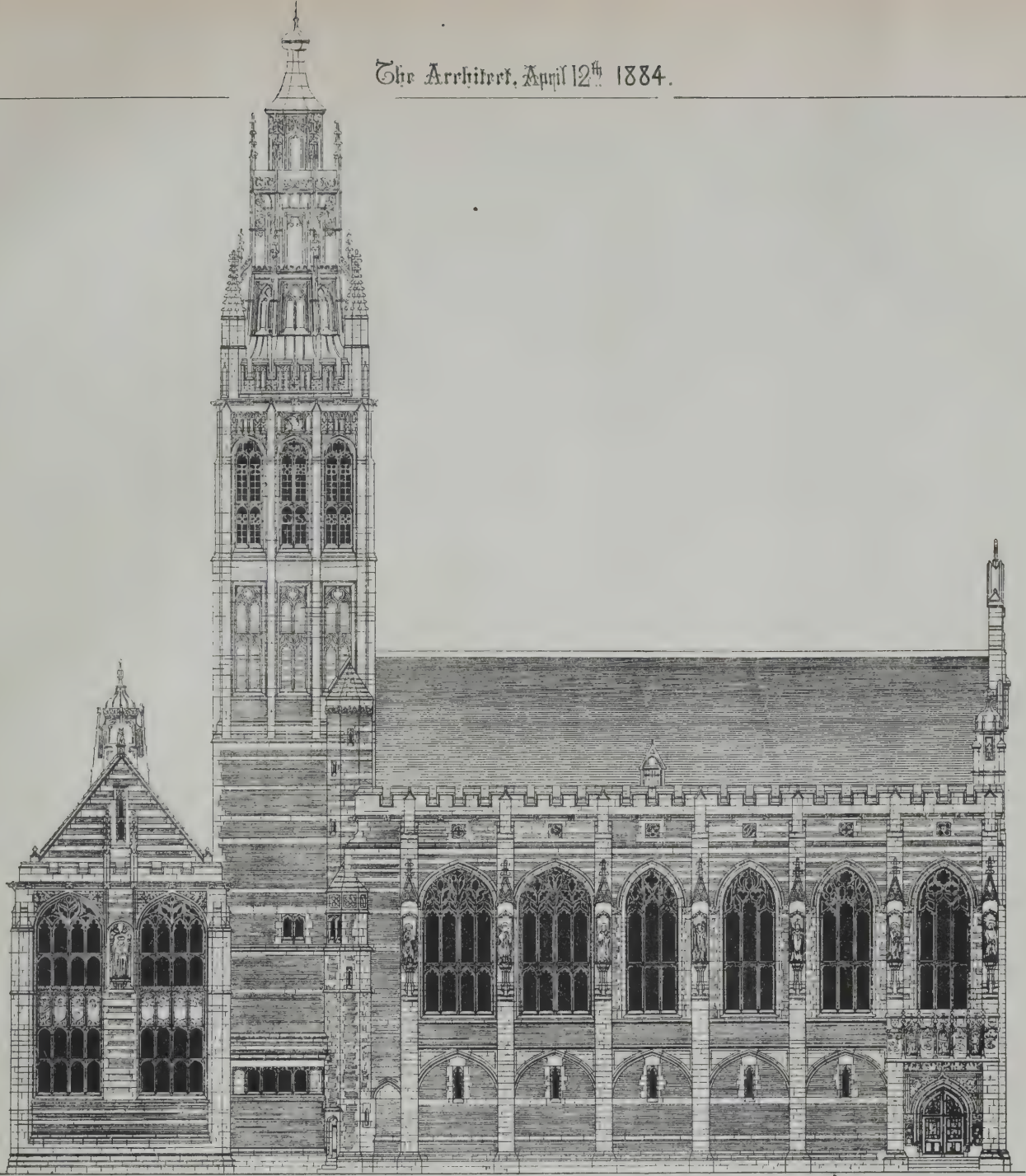
EDGE GREEN, DUBLIN.

A. ARCHITECT









SIDE ELEVATION.



CROSS SECTION.

DESIGN FOR A THEOLOGICAL COLLEGE.

AWARDED SOANE MEDALLION 1883-4

BY J. O. HARRIS







## ILLUSTRATIONS.

HIBERNIAN BANK, COLLEGE GREEN, DUBLIN.

THIS building, which is in one of the best positions in Dublin, was designed by Mr. THOMAS DREW, R.H.A.

DESIGN FOR A THEOLOGICAL COLLEGE.

WE publish reductions of some of the geometrical drawings which gained for the owner, Mr. J. O. HARRIS, of Bolton, the Soane Medallion. It will be seen that the style adopted is mainly Gothic; but in some of the buildings an effort has been made to introduce a later style in such a way as to clash as little as possible with the remainder. The design shows a knowledge of detail, with originality in grouping, and it deservedly obtained the principal prize of the Institute. It is creditable to find such excellent work produced in a place like Bolton, where a student has not the opportunities which are enjoyed by competitors in the metropolis and the larger provincial towns.

FELMFOEL VICARAGE.

NEW BREWERY, BRADFORD, WILTS.

THIS building is nearly complete, and has been carried out from the designs of Messrs. WEAVER & ADYE, of Bradford and Devizes.

## THE CASTELLANI COLLECTION.

AN occasional correspondent of the *Glasgow Herald* gives the following account of the collection of antiquities formed by the late Alessandro Castellani, and which the principal museums of Europe have been desirous to possess:—

To walk through the twelve rooms in which the Castellani collection is arranged, with one's eyes opened to the beauty of what is to be seen there, and one's mind awake to the impressions which ought to be derived from its contemplation, is to make a most fascinating journey amidst the relics of ancient history spared from the wreck of nations. Egypt and Cyprus, Greece and Etruria have furnished specimens of the potter's art: the *balsamarium* and *lekythos*, for holding ointments and perfumes; the *oinochœ* and *prochoos*, for drawing and pouring out wine; the *amphora* and *phithos*, for holding liquids; and the *kantharos* and *rhyton*, the ancient drinking-cups, with many others. It is not only the graceful forms of these various vases which render them objects of such beauty and so much sought after, but many of them bear pictures which are so many illustrations of ancient mythology and history, of manners and customs, and of the heights reached by ancient art. This collection supplies several examples of the crude style of decoration in which the early Etruscans ornamented their pottery—geometrical patterns or ill-drawn and fantastic representations of animals—and fragments of inscriptions in that language, which, though its characters are all understood and proper names are interpreted, still baffles the ingenuity of the learned. Greece, in its archaic period, furnishes vessels in the form of a cock, a running hare, a wine skin, or the head of an unknown animal. In the series of vases which have black figures on a red ground one bears a representation of Minerva Athene in a long tunic with embroidery, and armed with the ægis and a round shield. On another is represented the departure of a warrior in a chariot drawn by four horses. Hercules struggling with the Nemean lion forms the chief ornament of a third, and a fourth exhibits the same hero carrying off the Erymanthian boar. The poetical story of Apollo pursuing Daphne is admirably illustrated on a vessel for pouring out wine. The god crowned with laurel, his long hair flowing in curls, his right arm extended, a laurel branch in his left hand, is represented running his very swiftest. Daphne, who is soon to be transformed into a tree to save her from her persecutor, with both arms extended, and with shorter steps in her flight, looks back pitifully at Apollo. The design is excellent, the drawing of outlines graceful and sure, and the figures are red upon a black ground, brightly varnished. Hercules in a cradle, killing the snakes, as an American would describe it, with Minerva, tall, graceful, and beautiful, watching over him, is the chief subject on another vase, one of those used for carrying water, and which was probably a kitchen utensil borne on the head of an ancient Greek maiden to and from the fountain. One of the most rare and remarkable specimens of the best style of ancient Greek water vases, and which is likely to bring a very high price, has three handles, and is distinguished for its varied and brilliant colouring and marvellous preservation. It is supposed that the subject painted upon it represents Demeter and Koré (Ceres and Proserpine). The flesh of these two figures is painted white, while the other figures are red upon the black ground of the vase. The ornaments worn on the heads and arms of the figures are raised from the surface, and brightly gilded;

around the neck of the vase are two ears of corn gilded. The subject, the composition, the beauty of style, the fineness of execution, the splendour of the colours and the gilding, as well as the elegance of form of this vase, render it one of the most precious existing.

It would be a long task to mention, much less describe, the numerous examples of ancient ceramic art displayed in this collection. The terra-cottas, of which there are many specimens, all yield in value and beauty to the tiny figures from Tanagra in Boetia. A few of such objects in the British Museum are described as "remarkable for grace and refinement in the composition and modelling." Castellani, however, seems to have acquired the choicest works known of this art-centre. "A tiny figure from Tanagra," says Gentile in his "Archæologia," "shows to us the Greek who prays or labours in his humble home; and by their elegance, by their unmistakable artistic imprint, these relics furnish sure testimony that the sentiment of the beautiful had really penetrated and was diffused amongst the whole Greek race." That they were popular objects of household decoration may be concluded from the method and the material in which they are wrought. Greek art had reached its highest point of development at the period to which they are attributed, namely, that of Alexander the Great. The place where they were found is but a day's journey from Athens. That they were moulded is likely enough, but that they were retouched by the hand of a master is evident by the crispness of detail that they still exhibit. They were all coloured, and in many cases completely gilded. The contemplation of them brings to the mind, in a manner superior to any notion that can be gleaned from learned treatises, a complete idea of the grace and charm of Greek art, and leads one to excuse the apparently exaggerated language in which this art has been so lauded. In one tomb eight little figures were found. They all represent winged cupids, but no two are alike, and their height is from three to three and a half inches. The very spirit of happiness and grace of motion seems to have possessed them. In one the little god of love wears a hood, his left leg is forward as if he were running or dancing, and in the hand of his right arm, which is thrust forward, he carries a leaf-shaped fan, with a grace and "go" that a fashionable coquette might envy. In another tiny statuette, the same cupid is a *discobolus* or disc-thrower—the antique quoit player. He wears a chlamys wrapped around him like a scarf; his left leg is forward, his head is bent, and in his lowered left hand he holds the disc. Again he is seen crowned with leaves and flowers, a ball in his raised right hand, his left arm lowered, a mantle wrapped round him like a belt, and his left leg thrust forward. In one statuette he holds a flute, in another he wears a low hat with a knob in the centre, not unlike a Kilmarnock bonnet; and, again, with hood and mantle he extends his arms forward as a child towards its mother. A group of two young girls, the one bearing the other on her back, is charming in outline and sentiment. The young girl seated, with a veil drawn around her head and a dove perched upon her right shoulder, is particularly graceful. In this collection of Tanagra terra-cottas there are thirty-three pieces. The museum that may acquire these will possess a most excellent nucleus for the formation of a department of Greek art. The colouring, much of which remains, is chiefly in pale blue, pink, and white. The preservation of these frail and tiny statuettes is marvellous; their artistic value unparalleled.

There is no collection of antiquities complete without objects in bronze. That metal has passed through the vicissitudes of fire and flood and the destructive agencies of time with comparative immunity. Some of the bronze vases in the Castellani collection are of wonderful workmanship, and are rendered still more desirable by the *patina*, occasionally magnificent blue, with which they are covered. Their forms and ornaments, too, are deserving of notice. One has a handle in the form of the lyre-playing Apollo; another in a swan's head grafted on to the head of a griffin; others again have handles decorated with vine leaves and rosettes and parrot heads. Amongst the utensils in this metal are candelabra and many Etruscan mirrors, with mythological tales or historical incidents incised on the back. One mirror is unique, as its polished surface reflects the features of those who look upon it almost as well as a modern looking-glass. Then there are strigils for the scraping of the skin, and *fibula*, or buckles for fastening the dress; many bracelets and rings, and pins of various shapes. The toilette of an early Roman dame had its special "properties," just as that of a Parisian belle of the nineteenth century, and many of the objects connected with its mysteries are of the same nature as those used centuries ago. Vanity never grows old. The Egyptians who set the Israelites the task of making strawless bricks wore, we are told, wigs, and had their faces painted and powdered. Other objects met with here are a pair of scissors, a razor (in bronze, be it understood), a pair of pincers, a sickle, a hatchet, a *flagellum* or scourge, consisting of a handle to which three knobs were attached by small chains, and which was used to chastise refractory slaves.

In ivory, amongst other interesting objects, the figure of a Greek actor, wearing a tragic mask, through the eyeholes of which the eyes of the actor are seen within, wonderfully carved and in an excellent style of art and full of expression, is one of the treasures



of the collection. An Etruscan ivory drinking-cup, with bands of figures carved in reliefs, is noticeable, apart from its artistic and antiquarian value, by the fact that it is formed from the tusk of an extinct species of elephant. In silver, one of the most curious remnants of antiquity is a fragmentary *palera* found at Salerno, in the south of Italy. In the centre of the plate is King Ramesses II., the Greek Sesostris, holding a bundle of weapons with one hand, and with the other the hair of three kneeling and suppliant captives. Several hieroglyphic inscriptions are seen in cartouches in the space above the figures. The style of workmanship, as well as the historic interest of this cup, render it one of the treasures of the collection. The objects in gold contain a poignard of gilded bronze, the handle of which, in silver, is adorned with a wooden disk, covered with gold leaf. This was found by the French Egyptologist, M. Mariette, on the mummy Aah-mes, supposed to be Amosis, a king of the eighteenth dynasty. It was attached to the left arm of the mummy by a papyrus cord. The god Thoth, in gold, with an ibis head, holding in his hands the mystic eye, is a good specimen of Egyptian style. Archaic Greece is represented in this department by an ear pendant, found in Sicily, and carved with griffins and other figures, wrought with great care in a very antique style. The gold objects furnished by the excavations of Palestrina are particularly rich in ornamentation. They consist of a sceptre, a series of cylindrical boxes, a cup, and a set of buckles. The special character of the decorations on these is their wonderful fineness. Tiny globules, almost dust, lie upon lines scarce thicker than a thread. On other objects lions and fantastic animals are fixed with an art that inspires admiration, and the fineness of which suggests the constant employment of a strong magnifying glass. The style of ornament is of Oriental character, and is believed to be of Phœnician character, dating as far back as the seventh or eighth century before the Christian era. The jewel work of Etruria, which is different from either the Phœnician, the Greek, or the Roman, is well represented. The brother of the late antiquarian, whose collection is glanced at here, has acquired a high reputation for his exact and tasteful reproductions and arrangements of the various patterns in the gold work of Etruria, the popularity of which is largely indebted to his efforts. But besides all this there is a varied collection of ancient Greek and Roman jewels, of early Christian work in gold, of ancient rings and engraved gems and cameos, and of Assyrian and Persian intaglios and numerous scarabei. The head of Aphrodite in Greek marble, heroic size, is one of the finest existing, and is worthy of being placed beside the *Ludovisi Juno*. The collection of Greek medals is exceedingly rich, and contains unique specimens of great value. These, and the objects of the Renaissance and pre-Renaissance period of art, deserve a special mention, both for the sake of the period they represent and the character of the work they display.

### EDINBURGH ARCHITECTURAL ASSOCIATION.

AT the last meeting of this Association, Mr. David MacGibbon, president, in the chair, a paper on "Colour," by Mr. W. Scott Morton, was read. At the outset, Mr. Scott Morton explained the scientific theory of colour. After showing that colour is the effect of light, and that where no light is there is a complete absence of colour, he pointed out that the scientific explanation of how the sense of it reached the eye opened up a wide and intricate field of study for the practical colourist. The scientist shows that the three primary colours of the spectrum are red, green, and violet, the experimental proof of this being that none of these as they are found in the spectrum can be subdivided. But the practical colourist has to deal with pigments, which are never pure; and the ultimate indivisibility of these has fixed his three primaries as red, yellow, and blue, and the simplest proof of the impurity of these is that in the using of them in the best arranged proportions, on a revolving disc, we get gray, not white. This fact suggested a very practical consideration which every artist must keep before him, especially when imitating natural effects in which clear light has to be depicted; and that is—he cannot get the same pitch as in nature, but should bring his skill into play in displaying the quality or relation of the various parts of his composition, so as to give as clear as he can the effect of light. For some time the general tendency in our country had been to colour on a low scale, and this, he thought, was a good sign, as it evinced a desire for harmony, and the avoidance of the garish colours which recently were so familiar to us. At the same time, this low scale indicated timidity, and it was much to be wished that, with an advancing art education, decorators would give us pleasing colour on a higher pitch. Instead of the very cold and thin colours which were commonly used, some bloom and fulness of tone might be used—they would cost no more, and the artistic effect would be enhanced. These northern regions were, of course, unfavourable to the development of the colour sense, and the lecturer illustrated this by pointing to the results of the outstanding glory of Italy, its sunlights. We can never have in this country any such highly-coloured pictures as Venice presents; but, he added, let us be thankful for the lovely tints of the morning and evening sky, the rainbow, the

rich adornment of flowers, the varied plumage of birds, the blue and purple mountains, and the soft verdure of trees, valleys, and hills; and let those who had to spend most of their days in our cities keep their eyes open to the fine pictures to be seen in dull and foggy weather, when we get massive and picturesque groups in various hues of cold or brownish gray against a sky through which the sun is struggling to penetrate, giving us the complementary hues of warm gray, yellow, and orange. After all, we have the gray hue generally present with us, and more particularly in our cities. When the eye is filled with gray in walks abroad, it sought refreshment indoors in its complementary; and hence varied hues of yellow could be satisfactorily used in large masses in our interiors; and when other colours were required on large surfaces for variety, they ought to partake to some extent of a warm or yellowish hue. After giving out further practical suggestions, Mr. Scott Morton observed that one great difficulty in the way of advancement in house decoration was the want of technical education among the working painters. It was often found that the finished result of their work was disappointing, owing to the lack of skill in handling properly the various stages of their work, so as to give the bloom required on its completion. The styles of architecture were so varied that it was impossible to lay down any fixed rules for interior decoration, but he pointed out that every good-coloured scheme has the three primaries in modified proportion—that colouring should be sympathetic, adapting itself to the uses of the building where it is applied, and attention should also be directed to the well-ascertained influence of colour on the spirits and health of the people.

The members of the Edinburgh Architectural Association on Saturday afternoon visited Baberton House, Colinton House, and Bonally Tower. Leaving the city by train for Juniper Green, the party, numbering about seventy, under the conductorship of Mr. Hippolyte J. Blanc, vice-president, directed their steps towards Baberton House. Of the early history of this mansion, said Mr. Blanc, in the notes he had prepared for the occasion, very little information was obtainable. Built, according to tradition, as a hunting-lodge for James VI., it was said to have been gifted by that monarch to James Brand, with whose descendants it remained till about 1786. In the early part of the present century a family of the name of Inglis was recorded as owning the mansion, which, after having been possessed by the Christies, now belonged to Sir James Gibson Craig, of Riccarton. Though less ornate, the details of Baberton House bore a strong similarity to Heriot's Hospital, Winton House, Glasgow College, and Argyll's House, Stirling; and, all things considered, it seemed reasonable to assume that an architect from England, instructed by James VI., furnished the design. There was little noticeable in the treatment of the various apartments—a conspicuous exception, however, being a room at the north-east angle whose ceiling was beautifully decorated with geometric plaster panelling, and which bore the name of King Charles's Room, from having been occupied by Charles X. after his expulsion from France. Having had an opportunity, through the kindness of Mr. Somervell, the present tenant of the house, of inspecting a number of the apartments, with their many fine pictures, the party set off for Colinton House, where, on their arrival, they were courteously received by Major Trotter. The company first examined the ruins of Foulis Castle, within the grounds, after which Mr. Blanc, resuming his notes, said that the family longest associated with the barony of Colinton (originally called Hailes) was that of Foulis, who, in 1531, acquired it from the Cunninghams of Kilmaurs. The date of the ruin was assumed at 1450, and it was supposed to have been erected by the Cunninghams. The present mansion-house of Colinton was built in the beginning of the present century by Sir William Forbes, and, Classic in style, expressed the refinement of detail which characterised designs of the same period. One of the apartments, however, styled the Gothic Room, bore token of the degradation to which the art of Gothic had then fallen. The library contained some very fine examples of Gibbons's art in carved wood; and among the objects of interest in the interior was the chair used by Speaker Abercromby at the coronation of Her Majesty. Having been shown over the house, the company were conducted through the adjoining gardens, with their magnificent holly-hedges—for which hedges, said Mr. Blanc in his notes, they were probably indebted to the monks of Dunfermline, to whom the lands of Hailes were granted by Ethelred, son of Malcolm Canmore. The party, ere their departure, thanked Major Trotter for his kindness and attention, and closed a pleasant afternoon by afterwards visiting Bonally Tower.

### GLASGOW ARCHITECTURAL ASSOCIATION.

THE seventh session was opened on April 1 with a conversation and exhibition of drawings. Besides members' work there were loan collections of brasswork, plaster, and terra-cotta modellings, tiles, and tapestries, &c., &c. The hon. president, Mr. David Barclay, F.R.I.B.A., in the course of his opening address, congratulated the Association on its present prosperous condition considering the late reverses. Referring to the overstocking of the profession, he considered that the wide field now occupied by



decorative art called for many artists to whom the general training received in an architect's office was no bad preparation; it was also a suitable and convenient outlet for the many who at the expiry of their apprenticeship found the work of an architect was uncongenial. Remarking that the student should be catholic in his taste when sketching instead of starting with a prejudice for some particular style, he said that architects would often much prefer to see applicants for situations show sketches rather than designs as specimens of their ability, and this course is often better, for such as they would run no risk of missing the sympathy of some strong adherent of a different style.

The past hon. president, Mr. Leiper, F.R.I.B.A., I.A., then awarded his prize to Mr. William H. McNab; and the Association prize to Mr. William Shanks.

After short remarks from Messrs. Honeyman, Miller, and Gildard, architects, and Mr. Buchan, C.E., a social evening was entered upon.

The Secretary's report states that the office-bearers for the past session have been:—Honorary President, Mr. William Leiper, F.R.I.B.A., I.A.; President, Mr. P. Macgregor Chalmers; Vice-President, Mr. John C. T. Murray; Secretary, Mr. Alexander M'Gibbon; Treasurer, Mr. John Wallace; Business Committee, Messrs. William J. Boston, James Brough, William M'Nab, and William Watson. The membership roll has increased from twenty-nine to forty, eighteen new members having joined and seven resigned. There have been nineteen meetings, with an average attendance of eighteen. The papers read and discussed were:—"Our Work and Aims," Mr. Chalmers; "Saracenic Architecture," illustrated, Mr. M'Gibbon; "Timbers used in Buildings," with specimens, Mr. Smellie; "Architecture of Ayrshire," illustrated, Mr. Murray; "Palladio and his Work," illustrated, Members; "Personal Tours," illustrated, Members; "Modern Work in Glasgow," illustrated, Mr. Wallace; "Decoration," illustrated, Mr. Brough; "Early Christian Architecture," illustrated, Mr. Alexander; "Half-timber Work," illustrated, Mr. M'Nab; "Electric Lighting," with experiments, Mr. Honeyman. These have all been well received by the members, and their subjects freely discussed; the critic appointed to each opening. The Monthly Designing Competitions had the following for their subjects:—Wrought iron grille, marble fireplace, small staircase, oak cabinet, timber roof, memorial cross. Mr. William M'Nab gained the honorary president's prize for a "Hall Interior, Scottish in Character;" and Mr. William Shanks, the Association prize, confined to apprentices, for a "Country Manse." Three competitors for each.

Lectures have been delivered by Mr. William Leiper on "Architectural Rambles;" by Mr. Andrew Wells, on "House Decoration;" by Mr. John Honeyman, on "Air Currents as Affected by the Form of Apartments;" by Mr. Robert Scott, I.M., on "Building Contracts;" by Mr. W. Paton Buchan, S.E., on "Ventilation of Apartments;" and by Mr. James Sellars, on "Fact and Fiction." The attendance at these has been good, both of members and invited architects and assistants. Visits were made to Linlithgow Palace, Mount Stuart House, Bute—second visit; and Doune Castle and Dunblane Cathedral. A class of construction has also been successfully in operation, questions being given out monthly, and the written answers read to the meeting. The branches already considered are masonry, carpentry, formulæ for these, and constructional ironwork. A serious reverse has been met with in the loss of the whole of the Association and much of the members' property, by the fire of December last, which destroyed the premises, after the brief occupancy of only thirteen months. At the same time there were about forty-five drawings hung on the walls—chalk, measured, coloured, and competitive—some of considerable value; numerous casts, lent by members; easels and drawing materials, &c., and the complete library of the Association. Without delay, however, new rooms have been acquired, superior to the last in accommodation, comfort, and situation.

### THE INSTITUTE PRIZES.

IN 1885 the Soane Medallion (with fifty pounds) will be awarded to the author of the best design for a municipal mansion. The building is to be isolated on all sides, and to be placed on a site the area of which is not to exceed 14,000 square feet. The principal rooms to be arranged all on the ground floor, which should be raised some 6 to 8 feet above the level of the street, and consist of—(1) Justice-room, waiting-room, private room for the mayor, and one for his private secretary; (2) Grand entrance, vestibule, cloak-rooms, reception-rooms, large dining-room, drawing-room, banquetting-hall; (3) Private entrance-hall and staircase for the mayor, and residence on upper floors; (4) Kitchen and all necessary offices, including servants' room in basement. Drawings required:—Plans of basement floor, ground floor, and one upper floor; principal elevations, and two sections through principal room; all to be made to a scale of 8 feet to 1 inch. Half-inch scale details on an imperial sheet of paper, and one perspective

drawing, in which the building shall not measure less than 22 inches, will also be required.

The silver medal of the Institute (with ten guineas) will be awarded for the best illustrations, drawn from actual measurement (with dimensions figured both on the drawings showing the general arrangements and on the details), of any important building—Classical or Mediæval—in the United Kingdom or abroad, hitherto unpublished in that manner. The following subject is suggested as worthy of illustration:—A town or country house (including half-timbered houses). The following buildings are also suggested if more convenient to the competitor:—(Scotland) Holyrood Palace; (Ireland) Cashel Cathedral, or any monastic building; (Cambridgeshire) Gateway of Caius College, Cambridge; (Derbyshire) Bolsover Castle; (Devonshire) Church of Ottery St. Mary; (Kent) Knole House; (London) Entrance Gateway to Middle Temple Lane and the Steeple of St. Magnus the Martyr, London Bridge; (Northumberland) Ruined Buildings at Lindisfarne or Holy Island; (Nottinghamshire) Steeple of Newark; (Oxfordshire) St. John's College, Oxford; (Shropshire) Wenlock Abbey; (Suffolk) Long Melford Church; (Wales) Chirk Castle, Denbighshire. The drawings must not exceed six in number: to consist of at least one plan drawn to the scale of 8 feet to 1 inch, or, in the case of very large buildings, of 16 feet to 1 inch; also of one elevation and one section drawn to a scale of 8 feet to 1 inch, with details drawn to a scale of 2 feet to 1 inch, the profiles of mouldings being given one-fourth full size. Competitors are required to send, with their finished drawings, the rough sketches they have plotted on the spot.

The silver medal of the Institute (with ten guineas) will be awarded for the best essay on the following subject—"Pediments and Gables." Each essay, written very legibly on one side of ruled foolscap paper, must not exceed forty written sides of foolscap paper. It must be accompanied by suitable illustrations.

A prize of thirty pounds, under the bequest of the late Sir William Tite, will be awarded to the author of the best design, in the Italian style of architecture, for a grand pavilion in a fashionable watering-place, to stand in a garden, with one of the frontages facing the sea. The building to contain on the ground floor (raised some 2 feet above the garden), a ball or concert-room, 120 feet by 60 feet, with vestibule, cloak-rooms, &c., and a café-restaurant (facing the sea front). On the first floor, reading, smoking, and card-rooms, and ladies' drawing-room. In some part of the building private baths should be provided. The building is to be designed for a space of land 200 feet (facing the sea) by 110 feet. Drawings required:—Two plans; one elevation; transverse and longitudinal sections; all to be drawn to a scale of 8 feet to 1 inch. One bay of the concert-room down to a  $\frac{1}{2}$ -inch scale, an imperial sheet of details, and a perspective view, will also be required. Buildings for a similar purpose at Boulogne, Spa, Ems, Wiesbaden, and Homburg are suggested as the sort of pavilion referred to.

The Grissell gold medal will be awarded to the author of the best set of drawings of an original design for the central hall of a fruit and vegetable market, to be of iron construction, properly lighted and ventilated. The design must include a central lantern. Height of hall to top of lantern (exclusive of vane or finial) is not to exceed 100 feet. Drawings required:—Plan and section to a scale of 4 feet to 1 inch, one bay of the hall to a scale of 2 feet to 1 inch, and one imperial sheet, showing constructive details. The formulas and calculations for strength, &c., of one girder and of one rib must also be given.

### THE EDINBURGH CASTLE HALL.

THE following memorial from the Scottish Society of Antiquaries is about to be presented to Mr. Gladstone, with reference to the restoration of the historical Hall of Edinburgh Castle:—

*To the Right Honourable William Ewart Gladstone, M.P., First Lord of Her Majesty's Treasury, as representing Her Majesty's Government.*

The memorial of the Society of Antiquaries of Scotland sheweth—That the ancient buildings of the Castle of Edinburgh are connected with historical associations which have always rendered them objects of the highest interest to the inhabitants of the city and to Scotsmen generally. That from time to time for many years past public attention has been directed to the unsatisfactory condition of these national monuments, and especially to the fact that the ancient Hall of the Castle is at present divided by floors and party walls, and employed as a military hospital, and that proposals of restoration have been made which have not been brought to practical issue. That at the present time your memorialists believe that the military authorities of the garrison would be well pleased to see the removal of the hospital patients from the existing building, which is in many ways ill suited for their accommodation; and they beg, accordingly, to urge in the strongest manner the advisability of taking this opportunity of restoring the Hall, and other ancient parts of the structure adjacent thereto, to



something like their original condition. The ground on which your memorialists venture to address the Government on this matter is the antiquarian, architectural, and historical interest of the building in question. It is a portion of one of the three most important royal residences of the Stuart kings, and is distinctly mentioned in records of the fifteenth century. It has been the meeting-place of the Scottish Parliament, and has witnessed within its walls some of the stirring events of the national history. Of the form which its restoration should take it is impossible, before the removal of floors and party walls, to speak with any certainty; but ancient features of the building which still remain, such as the roof, the carved corbels upon which its beams rest, and the traces of windows on the southern side, would, it is believed, afford sufficient grounds for a satisfactory restoration. Your memorialists beg, therefore, most respectfully to represent to you, the First Lord of the Treasury, and to Her Majesty's Government, the extreme gratification which it would afford to the subjects of Her Majesty in Scotland, and especially to the citizens of Edinburgh, to be able to stand beneath the roof of the Great Hall of the Castle, restored to its ancient proportions, and to see the building consecrated again to such uses as may make it a pride and ornament to the city. And your memorialists will ever pray.—LOTHIAN, President; ROSEBURY, Vice-President; ARTHUR MITCHELL, Vice-President; W. COCHRAN PATRICK, M.P., Secretary; J. R. FINDLAY, Secretary.

Memorials to the same effect have, it is understood, also been forwarded to the Premier by the Royal Scottish Academy and the Edinburgh Architectural Society.

### SURVEY OF THE LOCHS OF SCOTLAND.

THE following is a copy of the correspondence between the Treasury and the Royal Society of Edinburgh on the subject of the survey of the depths of Scottish lochs.

Royal Society of Edinburgh, July 11, 1883.

Sir,—In consequence of the investigations now being carried on with reference to the physical and biological conditions of the Scottish freshwater lakes, and, also, because of the importance, in certain branches of geological inquiry, of knowing the form of the basins occupied by these lakes, it has been prominently brought under the notice of the President and Council of this Society, that no bathymetrical survey of these lakes exists. I have therefore been requested by the President and Council to ascertain from Her Majesty's Government if there is any probability of this work being soon undertaken, and, at the same time, to state that it would be a great satisfaction to the President and Council to learn that instructions had been issued by the Lords Commissioners of Her Majesty's Treasury to the officers of the Ordnance Survey, or of the Hydrographic Department of the Admiralty, to undertake a survey of a few of these lakes, similar to the excellent ones already made of Loch Lomond and Loch Awe—say Lochs Morar, Maree, Lochy, Assynt, Shin, Tay, Erich, Rannoch, Earn, Doon (in Ayrshire).

I am, &c.

(Signed)

P. G. TAIT,

Secretary of the Royal Society of Edinburgh.

To the Secretary of Her Majesty's Treasury, Whitehall.

Treasury Chambers: September 17, 1883.

Sir,—With reference to your letter of July 11 last, and the reply from this board dated the 10th ultimo, relating to a proposal to execute a bathymetrical survey of certain fresh-water lakes in Scotland, I am directed by the Lords Commissioners of Her Majesty's Treasury to acquaint you that my Lords are informed that the nautical surveys of Loch Lomond and Loch Awe, referred to in your letter, were undertaken by naval officers in the interests of navigation, and that the same considerations do not apply to the other lochs on which surveys are suggested in your letter. My Lords are also informed that the proposed bathymetrical surveys do not come within the functions of the Survey Department of the Office of Works (late Ordnance Survey). Under these circumstances, my Lords regret that they are unable to sanction the proposed surveys.

I am, &c.

(Signed)

LEONARD COURTNEY.

Professor Tait, Royal Society of Edinburgh.

Royal Society of Edinburgh Rooms.

Sir,—I beg to acknowledge the receipt of your letter of September 17 last.

In reply, I am requested to express the regret with which the President and Council of the Royal Society of Edinburgh learn that it is not regarded as within the functions of the Board of Admiralty or of the Survey Department of the Office of Works to undertake a bathymetrical survey of the lochs of Scotland, and that the Lords Commissioners of Her Majesty's Treasury cannot sanction the proposed surveys of the lochs.

It appears to the President and Council that a very important part of the survey of the United Kingdom will thus be left wholly untouched, for it cannot be denied that it is at least as important,

sometimes much more important, to know the depth of a lake than to know the height of an adjoining mountain.

It would be a matter for great regret if the admirable surveys which are now drawing to a close, which reflect so much credit on the officers who conducted them, and do honour to the scientific reputation of the country generally, should be marred by the great omission here pointed out.

In these circumstances the President and Council hope the Lords Commissioners of Her Majesty's Treasury may reconsider their decision, and may yet see their way to sanction the proposed surveys.

I have, &c.

(Signed)

P. G. TAIT,

Secretary to the Royal Society, Edinburgh.

L. H. Courtney, Esq., M.P.

Treasury Chambers, January 2, 1884.

Sir,—I am directed by the Lords Commissioners of Her Majesty's Treasury to acknowledge the receipt of your letter of the — ultimo, expressing the regret of the Royal Society of Edinburgh at the non-acceptance by the Government of the proposal to undertake a bathymetrical survey of certain freshwater lakes in Scotland, and I am to state that my Lords must abide by the decision communicated to the Royal Society in the letter from this Department of September 17 last.

I have, &c.

(Signed)

LEONARD COURTNEY.

Professor P. G. Tait, Secretary to the Royal Society, Edinburgh.

### THE ROMAN ALTAR AT LINCOLN.

A LETTER has been sent to the Rev. Precentor Venables by Professor Hübner, of Berlin—the first living authority on inscribed Roman monuments—giving an opinion upon the character of the altar lately found at St. Swithin's, Lincoln. The Professor regards the altar as belonging to the end of the second, or the beginning of the third century after Christ; and is inclined to the view that the doubtful term "curator" had a religious reference, and that Frontinus was a worthy Roman soldier, held in such high esteem by his comrades that they chose him three times "chapel-warden" of the little place of worship of the troop which, twelve or thirteen hundred years ago, stood on the site of the present St. Swithin's, a forerunner of the modern churchwardens. The following is the letter:—

Berlin: March 30, 1884.

My dear Sir,—I sit down immediately to answer your request respecting the recently discovered altar of the "Parcae deae et Numina Augusti." It is a curious little monument. From the character of the writing, combined with its contents, I am inclined to ascribe it to the end of the second or the former part of the third century. You have rightly hit on the true meaning of the *dea Parcae*, for they seem, as other members of the Greek and Roman Olympus, to have been identified, in provincial worship, with female divinities of foreign or local, or at least non-Roman origin. Whether they are to be considered as *matres* or *matronae*, or perhaps as *nymphae*, is a matter not easily to be settled in a general way. These compound divinities are so extremely frequent that each single occurrence has to be considered by itself. The conclusion to be arrived at about them depends a little on the character of the person who made them a vow and erected the little altar. But this is the doubtful point in the inscription. We know sundry "curators" of different characters (see "Ephemeris Epigraphica," vol. iv., p. 434). There were military ones, *curatores fisci* (cash-keepers) of the prætorian and urban cohorts; curators of *ala* and cohorts of auxiliaries, *curatores veteranorum*, &c. Neither of these charges seems to have been that of C. Antistius Frontinus. If he had been three times in charge of that peculiar *cura* it must have been a temporary one, which, as may be presumed, was not the case with those military *cure*. In Lambæsis in Africa (now the French convict-colony of Lambez) we have a *curator scholæ* who was one of the soldiers of the third legion ("Corp. Inscris. Lat." vol. viii., 2562). Lincoln was a thoroughly military place. I should think it most probable Frontinus was in charge, for the third time, of that same small temple or *Aedicula* to which he gave the little altar now discovered, for the last line seems scarcely capable of another expansion than this: *ar(am) d(e) s(uo) d(edit)*. If Frontinus, as I suppose, was a soldier or a veteran of one of the Roman legions stationed at Lindum, the *dea Parcae* may have been worshipped by a *sodalitium* (or club) of soldiers, who had brought them over to England from their native country. Such a community of worshippers is very likely to have had a common sanctuary, the curator (or warden) of which Frontinus was chosen for the third time. I think TER may be accepted as the complete form of the numeral adverb (*ter*, three times), not as an abbreviation of *ter(tio)* or *ter(tium)*, in spite of Cicero's well-known joke about Pompey's Theatre and its inscription. AR for *Aram* is not a very common abbreviation, but there is certainly no explication of the word more simple and more safe. Who the Augustus was whose *numina* were worshipped by that community, together with the *Parcae*, remains, of course, uncertain. One might think of Marcus Aurelius or Septimius



Severus. But that the reigning Emperor's *numina* are placed in a most loyal mood, besides the other divinities, agrees very well with their supposed military character. This, my dear sir, is all that occurs to me in the way of observation on your nice new Roman altar of Lindum. I hope the soil of your venerable old town will not cease to furnish us with new and interesting objects in the age of discoveries we live in. Yours faithfully,  
Rev. Precentor Venables. E. HÜBNER.

### THE MARKET HALL, BURTON-ON-TRENT.

THE increase in the cost of the Market Hall was considered at a late meeting of the Burton Town Council, when an explanation was given by Mr. Harrison, one of the councillors. He said it had been for some time anticipated that the original estimate would be exceeded, and it was well that the exact state of the case should be put before the public. It would be remembered that the committee recommended for adoption a certain plan selected from a number of competitive designs; but the Council suspecting that the work could not be carried out for the sum mentioned in the advertisement, referred the matter to an independent firm of architects, who reported that out of all the plans only two were suitable, and one of these was ultimately accepted. A contract was entered into for 10,312*l.*, and the Council afterwards entered into a further contract for the stalls and some internal fittings for 830*l.*, thus making the total 11,142*l.*, which amount had been distinctly authorised by the Council. The extras in the contract proper amounted to 2,408*l.*, which was of course a serious matter. This was made up as follows:—700*l.* for additional cost of foundations, 110*l.* for a structural alteration, 275*l.* for making the gallery available for market purposes and railing, 120*l.* for drainage, 282*l.* for iron fittings in butchers' shops, 165*l.* for stoves, fireplaces, and extra gas-fittings in the balcony, and 756*l.* for general extras. The committee did not wish to shirk their responsibility, but it must be apparent there was a great deal of matter in the accounts over which they could not possibly have had control. The contract was deliberately entered into by the Council, based on a certain bill of quantities, and the quantities had now been found to have been understated. That, no doubt, had arisen to a great extent from the way in which the Council had tied the committee down to a sum which was manifestly insufficient. Further extras had been incurred, including 25*l.* for shutters, 154*l.* 10*s.* for carving, 557*l.* for road-making, and 57*l.* for iron rails, which brought the total to 14,672*l.*, exclusive of the charges of the architect and clerk of the works. To compare the gross sum spent with the sum mentioned in the advertisement was, he argued, misleading; and he contended that if any comparison must be made it should be between the 11,142*l.* approved by the Council and 14,672*l.*, which included 557*l.* for road-making, which the committee had not expected to have to do, and the cost of other matters, which might more fitly be put down to furniture than building. The committee regretted the additional cost, but he was of opinion no great saving could safely have been effected without very much lessening the extent of the building, and that was not now too large for the requirements of the town.—Alderman Wardle, in criticising the statement, said the Council voted the original sum on the recommendation of the committee, and if it were manifestly insufficient, why, he asked, did the committee not then find it out? It appeared to him the estimate must have been loosely drawn when something like 50 per cent. additional cost had been incurred before the mistake was found out. He pointed out that the Council obtained a loan of 11,270*l.* on the recommendation of the committee, but 3,200*l.* of that was for land. The plans were submitted to Messrs. Evans & Jolley, and their report was not far wrong when it was remembered that they were not asked to report upon fittings or anything not contained in the plans. The feeoffees afterwards gave 1,000*l.* for ornamentation, and the Council was asked by the committee to allow another 450*l.* for similar work, so that the cost of the hall would be 9,450*l.* Tenders were obtained, and one for 10,300*l.* was accepted, but that amount had been swollen to 15,828*l.*, and it was the difference between those sums which had to be considered. The real fact was that 8,000*l.* was required for the mere shell of the building, and if the committee had said as much, a loan could have been obtained for the fittings. The difference between the loan obtained and the actual cost was too much to be paid out of the year's rates, and he therefore moved that the Finance Committee should be instructed to obtain a further loan of 5,000*l.*—Mr. Auty seconded the motion.—Mr. Riley thought such a discrepancy would not have occurred if the committee had been allowed to select their own plans, instead of having the lot submitted to other architects.—Mr. Turner said that so far as he knew no additional expense had been incurred without the sanction of the Council.—Alderman Lowe said there was hardly a single plan which could have been carried out for 8,000*l.* He pointed out that the foundations had cost 700*l.* more than had been anticipated, and that was an item no human foresight could have provided for.—Mr. Pickering having urged upon the Council the necessity of studying economy, the town clerk

said in reply to a question that the various additions had from time to time been brought before the Council. On this the Mayor remarked that the Council were responsible, and Alderman Wardle's proposition was agreed to.

### AMERICAN CHIMNIES.

AT the meeting of the American Society of Civil Engineers which was held on the 5th ult. descriptions were read of a few large chimnies.

The Pacific Mills Chimney at Lawrence, Mass., which was built by Mr. Hiram F. Mills, C.E., in 1873, consists of an outside octagonal shell 222 feet high above the ground, with a distinct interior core 8 feet 6 inches in diameter inside, extending one foot above the top of the outer shell and 11 feet below the ground. The chimney is founded 19 feet below the ground, upon coarse sand, the foundation being 35 feet square, enclosed by pine sheet piling. The base is concrete, one foot thick, then rubble masonry of large pieces of granite in cement, this stonework being 7 feet high. Upon the stonework is placed the brick chimney, the outer shaft being at the base 20 feet wide, and at the top under the projecting cornice 11 feet 6 inches wide. This brickwork is 28 inches in thickness at the base; at 12 feet in height it becomes 24 inches, which continues 18 feet; then 20 inches for 20 feet; then 16 inches for 40 feet; then 12 inches for 60 feet; then 8 inches to the top. The inside core is two feet thick to a height of 27 feet, and one foot thick for the remaining height of 154 feet. The top of the chimney is of cast-iron plates three-quarters of an inch thick. The horizontal flue entering the chimney is 7 feet 6 inches square. The vertical flue of the chimney is a cylinder 8 feet 6 inches in inside diameter, and 234 feet high with walls 20 inches thick for 20 feet, 16 inches thick for 17 feet, 12 inches thick for 52 feet, and 8 inches thick for 145 feet. The foundations were laid in mortar of Rosendale cement and sand; the outer shell in mortar of Rosendale cement, lime and sand; and the flue walls in mortar of lime and sand.

During the winter of 1873, the flue being 90 feet above the ground, boilers having 452 square feet of grate surface were connected with the chimney with satisfactory results. Between June and September 1874 the chimney was finished. The approximate weight of the chimney is 2,250 long tons, the number of bricks being about 550,000. The chimney is opposite the middle of a line of twenty-eight boilers, and 210 feet distant from them. It was designed to serve for boilers having 700 square feet of grate surface, burning about 13 tons of anthracite coal per square foot of grate surface per hour.

The chimney of the Merrimack Manufacturing Co., at Lowell, Mass., was built under the direction of Mr. J. T. Baker, C.E., in 1882. This chimney is founded on a ledge of sandstone. The foundation, 30 feet in diameter, is built of granite blocks laid as they come from the quarry. At the surface of the ground there is a dressed granite base 2 feet 6 inches in height, laid in clear Portland cement, the remainder of the foundation being in Rosendale cement and sand. Upon this base is placed the brick-work, consisting of three cylinders, the outside one 28 feet in diameter, 24 inches thick, the middle one 18 feet in diameter 8 inches thick, the core 12 feet inside diameter and 16 inches thick. The middle cylinder is carried up vertically 75 feet 6 inches; the outside ring has a batter of  $\frac{42}{100}$ ths of an inch per foot to a height of 100 feet. At the height of 75½ feet the middle ring connects with the exterior ring, making the masonry at that point 36½ inches thick; it is then 20 inches thick for an additional height of 60 feet; 16 inches thick for 70 feet; and 12 inches thick thence to the enlargement for the chimney head. The core is uniformly 12 feet inside diameter to the top, the first 100 feet being 16 inches thick; then 12 inches thick for 60 feet; then 8 inches thick for 90 feet; and then 4 inches thick for 29½ feet to the top. It is entirely separate from the outside masonry, except about the doorways and openings for the flues. The core was laid in mortar of lime and sand; the outside shell in lime, cement, and sand.

The chimney built under the direction of Dr. Charles Emery, M. Am. Soc. C.E., at the Greenwich Street Boiler House of the New York Steam Heating Company, was a creature of circumstances, it being necessary to place within a very limited area a very large boiler capacity, viz., 16,000 horse-power. This was done by making four storeys of boilers; the chimney was therefore necessarily located with reference to these boilers, and the plan of the chimney was determined by the shape of the lot. The beach of the Hudson River was at some time at this locality, and the foundation of the chimney was placed in fine clear beach sand, with some packets of coarser sand and a little stone. The foundation is 1 foot below high water. The chimney is 27 feet 10 inches in the clear inside, and 8 feet 4 inches wide. The height is 220 feet above high water—221 feet above the foundation.

A chimney erected in Mexico for a cotton factory about 160 feet high, had been in use for over twelve years. It was built of apparently sun-dried bricks, and seemed to be now in excellent condition. This chimney was built by Indians and seemed to be



very symmetrical and well made. The bricks were about 10 by 3 by 7. Another chimney described was constructed of old rails, and was in successful use in Pennsylvania. It was generally known as a crinoline chimney. Mr. Wm. E. Worthen referred to several chimneys built by him, and expressed a doubt as to the necessity of very great height in chimneys.



#### Wood-Block Flooring.

SIR,—We have had our attention directed to a letter concerning us, which appears in your issue of the 29th ult., and in which exception is taken to a paragraph in your paper of a former date anent our improved system of wood-block flooring.

Permit us to state that the paragraph in question is in every particular correct. Your correspondents' client has no interest or connection either with the patent system referred to or with our business.

Having incurred a considerable expenditure of money and labour in establishing this wood-block flooring business, we must resent any attempt to injure the same, and shall be compelled to take notice of any further acts of a like nature to that now complained of.

Kindly give this a place in your next issue.

Yours truly,  
7 John Dalton Street, Manchester : GEARY & WALKER.  
April 7, 1884. (Late ANDREWS & CO.)

#### Water Supply to Country Houses and Isolated Buildings.

SIR,—Judging by the extracts from Mr. W. E. Rich's interesting paper, read before the Architectural Association, given in your last week's impression, it would appear that one system, upon which hundreds of isolated residences are annually furnished with pure water supplies, seems not to have been mentioned. We refer to the "Abyssinian" and Artesian tube-well system, which of all others is peculiarly suited to the objects embraced in the paper under consideration.

In the first place, these tube-wells enable the preliminary search for water to be made with rapidity and comparatively small outlay; and then, when secured, the supply so obtained is free from the many contaminations which sooner or later find their way into ordinary dug wells. Given but a fairly impervious stratum overlying the water-bearing seams below, the tubes driven down effectually seal off surface and other soakage which the old-fashioned well practically invites into it.

So much are these facts realised by architects that we are constantly being called in to replace a polluted supply by driving or boring a tube-well from the bottom of an existing well in search of a pure source beneath. Frequently these lower springs, when tapped, rise to very near the surface, and the water is easily raised by manual labour at the rate of 500 to 600 gallons per hour. Occasionally they rise above the surface, yielding a constant flow, which can be led into cisterns and controlled by a ball-tap, just like water laid on from a reservoir. When the springs happen to lay 100 feet or 150 feet below surface a pony-wheel, gas-engine, or hot-air engine will meet all the requirements of a large establishment, by means of simple deep-well pumps designed expressly for tube-wells. Sometimes a windmill serves the purpose.

We are, Sir, yours obediently,

LEGRAND & SUTCLIFF,  
Magdala Works, 100 Bunhill Row, Artesian Well Engineers.  
London, E.C. : April 8, 1884.

#### NEW BUILDINGS.

**London.**—On Saturday the foundation-stone of a new library for the Honourable Society of Gray's Inn was laid by Mr. Arthur Collins, Q.C., the treasurer, at the north-eastern corner of South Square. The new library was rendered necessary by the present library being too small, and it is designed to contain some eleven or twelve thousand additional volumes. It will, it is understood, be completed and fit for occupation by the end of the next long vacation. The new building will have a commanding frontage in the Gray's Inn Road, with entrance-hall, vestibule, and staircase approached from South Square, forming a connecting block with the Steward's office and existing libraries, and will also include suites of rooms for chambers and strong-rooms for the use of firms established in the Inn. Messrs. Isaacs & Florence are the architects.

**Alhambra Theatre.**—This theatre, which has been closed for alterations and decorations for the last three weeks, is to reopen on the 12th inst. The principal alterations which have been made have been the construction of a new and broader staircase in concrete to give access to the dress-circle and first tier of boxes,

and a new entrance to the pit stalls. The screens on either side of the proscenium have been removed, and the opening increased to a clear width of 38 feet. Messrs. J. Shoolbred & Co. were selected after competition to be the contractors, and they have carried out the whole of the works, constructional and decorative, under the superintendence of Messrs. Perry & Reed, the architects to the company.

#### CHURCH BUILDING AND RESTORATION.

**Chedzoy, Somerset.**—The chancel of the church of St. Mary the Virgin, Chedzoy, is to be restored, and the works will be commenced immediately after Easter. There are some interesting features of the thirteenth century, and the church (like many other churches in Somerset) is rich in sixteenth-century woodwork. The erection of a sacristy, on the north side of the choir, forms part of the present contract. Between the nave and sanctuary there exists a sixteenth-century wood screen, which has been cut about and altered at some time, but it will now be restored, and a rood of fair proportions will be added. The works are in the hands of Mr. Slingsby-Stallwood, architect, of Reading.

#### WORKS IN PROGRESS.

**Messrs. Wallis & Strang,** of Newcastle-upon-Tyne, having procured special official inspection of their stained-glass windows, by the Customs authorities of the United States Government, have been informed that in future their windows will be classed as "paintings" among "works of art," and, when the property of a religious society, will be admitted free of duty.

**Messrs. Adams & Co.,** of No. 7 Westminster Chambers, S.W., and York, have supplied their patent flushing appliances to upwards of one hundred towns since their introduction three years ago. The enormous flushing power of these syphons, coupled with the economy of water which their use effects, and their adaptability to any depth of sewer, has thus rapidly brought them into such general use.

**Messrs. Butters Brothers,** Percy Crane and Engine Works, Glasgow, have just erected for Mr. Wm. Brass, builder, one of their celebrated builder's steam-derrick cranes on three stages, to take down and rebuild 130 and 131 Cheapside. They seem very useful and quick.

#### GENERAL.

**Mr. H. Herkomer, A.R.A.,** has left for the neighbourhood of Tremadoc, where he proposes to spend some time under canvas, depicting the scenery about Snowdon.

**Professor Gustave Richter,** the German portrait-painter, died at Berlin on the 3rd.

**M. Meissonnier's *La Rixe*,** which forms part of the Royal collection, will be sent to Paris for the forthcoming exhibition of that artist's works.

**Mr. Edmund Evans** has presented to the Manchester Art Museum a complete set of seven electrotypes blocks used for printing the first coloured illustration in Mr. Randolph Caldecott's "House that Jack built." Mr. Evans has also given the Art Museum a series of fifteen proofs showing every stage of the printing of one of the double-page coloured pictures in Mr. Walter Crane's "Goody Two-shoes."

**The Death** is announced of Mr. Edward Milner, the well-known landscape gardener. Sir Joseph Paxton in 1844 entrusted to Mr. Milner the superintendence of laying out Prince's Park, Liverpool.

**A Prize** of ten guineas offered last August by the Royal Manchester Institution, to be competed for by the School of Art, has been gained by Mr. C. T. Weston.

**Plans for a new Church** at Lightbowne, in the parish of Moston, have been prepared by Mr. A. W. Smith, of Manchester, providing sitting accommodation for 300 persons.

**Mr. J. D. Watson,** of Dundee, has been appointed burgh surveyor of Arbroath.

**The Sum** of 2,500*l.* has been up to the present subscribed for the restoration fund of St. Mary's Church, Warwick.

**The Court of Common Council** have sanctioned a recommendation of the Special Guildhall Improvement Committee relative to the erection of the new Council Chamber, that 8,000*l.* be devoted to furniture, fittings, &c.

**Mr. C. Rolfe,** of Oxford, has prepared plans for the addition of a south aisle to St. Martin's Church, Ongar, and a tender for the work has been accepted amounting to 1,173*l.*

**The South Shields Town Council** have decided on the necessity of building municipal buildings for the borough.

**The City of Berlin** contains 14 houses each inhabited by more than 300 persons, 162 houses inhabited by between 200 and 300, and 2,588 houses by between 100 and 200. The largest number of persons living in one house is 1,080. In 1883 the population of Berlin was 1,226,392, and in 1850 the population was 419,720.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, APRIL 12, 1884.

### TENDERS, ETC.

*\*\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*\*\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
"Contract Supplement to THE ARCHITECT."*

### COMPETITIONS OPEN.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**SUNDERLAND.**—May 19.—Designs are invited for Laying out Twenty Acres of Land, the Mill Farm and Broad Meadows, Durham Road, Sunderland, for Villas, Terraces, or Street Rows, with Sewerage, &c. Premiums of Thirty and Twenty Guineas. Messrs. Duncan & Duncan, Solicitors, 3 Market Place, South Shields.

### CONTRACTS OPEN.

**ARDLEY.**—April 14.—For Erection of Farmhouse, Outbuildings, and Two Cottages, for the Duke of Marlborough. Mr. G. L. Watson, Estates Office, Blenheim.

**BEDLINGTON COLLIERY.**—April 12.—For Building Wesleyan Chapel. Mr. James Gray, Bedlington Colliery.

**BROMSGROVE.**—April 12.—For Building Infirmary for the Union. Mr. Charles A. Edge, Architect, 21 Bennett's Hill, Birmingham.

**BROMYARD.**—April 21.—For Building School and Master's House. Mr. A. H. Parker, Architect, 5 Foregate Street, Worcester.

**BROUGHTON.**—April 19.—For Works of Restoration at Parish Church. Rev. W. Wyatt, Broughton Rectory.

**CAMBRIDGE.**—April 15.—For Building Congregational Church. Messrs. Banks & Townsend, Architects, 23 Finsbury Circus.

**CARLISLE.**—April 17.—For Alterations and Additions to Irthing Villa, Newby, Warwick Bridge. Mr. James Leslie, Architect, 27A English Street, Carlisle.

**COLNE.**—April 28.—For Construction of Outfall Sewerage Works. Mr. Henry Bancroft, C.E., 83 Mosley Street, Manchester.

**DARENTH.**—April 14.—For Boundary Wall to Gore Farm. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**DUBLIN.**—April 15.—For Alterations to Nos. 22 and 23 Thomas Street. Mr. D. J. Freeman, City Architect, City Hall, Dublin.

**ELLAND.**—April 12.—For Building Mistal, Coach-house, and Cart Shed. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**ELLAND.**—April 15.—For Building Fireproof Warehouse at Spa Well. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**GAINSBOROUGH.**—May 19.—For Making a new Barrier Bank. Mr. Alfred Atkinson, Surveyor of Sewers, Brigg.

**GOSFORTH.**—April 17.—For Works at St. Nicholas's Church. Messrs. Austin & Johnson, Architects, 3 Arcade, Newcastle-on-Tyne.

**HUNSLY.**—April 19.—For Building Two Houses and Shop, Moorside. Messrs. Richard Towse & Son, Architects, Dewsbury Road, Leeds.

**IPSWICH.**—April 29.—For Building Shops and Assembly-room, Carr Street. Mr. J. F. Goodey, Architect, 2 Victoria Chambers, West Stockwell Street, Colchester.

**LEICESTER.**—April 22.—For Construction of Wrought-iron Lattice Girder Towing-path Bridge. Mr. J. Gordon, C.E., Borough Surveyor, Town Hall, Leicester.

**LEICESTER.**—For Repairs and Alterations to Baptist Chapel. Messrs. Redfern & Sawday, Architects, 14 New Street, Leicester.

**LEEDS.**—April 26.—For Works in Erection of Coach Builder's Premises. Mr. D. Dodgson, Architect, 18 Park Row, Leeds.

**LIVERSEDGE.**—April 21.—For Construction of Tanks, Filters, Channels, Culverts, Sewers, &c., and Erection of Buildings, Walls, and other Works for Sewage Treatment. Mr. C. Gott, C.E., 8 Charles Street, Bradford.

**LOW FELL.**—For Erection of School Buildings. Mr. J. J. List, Architect, Scottish Chambers, West Grainger Street, Newcastle-on-Tyne.

**MORPETH.**—April 18.—For Extension of County Lunatic Asylum. Mr. J. Cresswell, County Architect, Moot Hall, Newcastle-on-Ty.

**NORTHALLERTON.**—April 22.—For Building Chancel to Parish Church. Mr. J. I. Jefferson, Northallerton.

**NORTH SHIELDS.**—April 17.—For Construction of Brick Gasholder Tank. Mr. W. B. Davidson, 97 Bedford Street, North Shields.

**OAKFORD.**—April 17.—For Construction of Covered Reservoir, and Laying Cast-Iron Pipes. Mr. Alfred Mitchell, City Engineer, Municipal Offices, Bath.

**PETERBOROUGH.**—April 14.—For Construction of Concrete and Brick Gasholder Tank. Mr. G. E. Stevenson, Gasworks, Peterborough.

**SOWERBY BRIDGE.**—April 15.—For Building Five Shops and Seven Houses (Mason's Work). Mr. Wilkinson, Architect, Sowerby Bridge.

**ST. ANNES-ON-THE-SEA.**—April 21.—For Supplying and Fixing Cast and Wrought Ironwork (200 tons) for Landing Stages and Jetty. Messrs. Garlick & Sykes, C.E., 33 Winckley Square, Preston.

**TOOTING GRAVENY.**—April 17.—For Re-seating Parish Church and other Works. Mr. W. P. Mellhuish, High Street, Tooting Graveny, S.W.

**TOTTENHAM.**—April 21.—For Construction of Brick and Pipe Sewers. Mr. de Pape, Engineer to the Local Board, High Road, Tottenham.

**VELINDRE.**—April 22.—For Building Pair of Cottages on Estate of Captain Wood. Messrs. C. & G. Butcher, Glasbury, R.S.O.

**WEST VALE.**—April 12.—For Erection of Dwelling House and Outbuildings, Dean Street. Mr. W. H. D. Horsfall, Architect, Albany Chambers, Commercial Street, Halifax.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

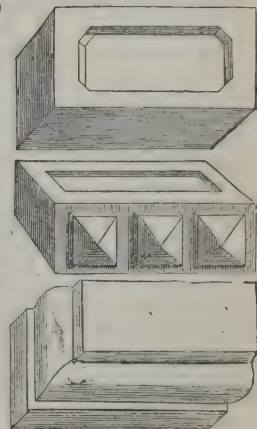
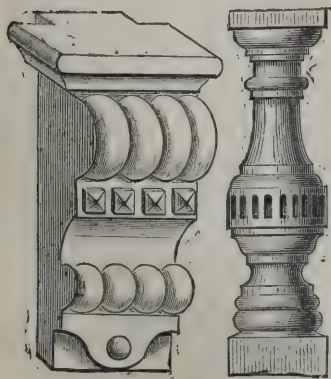
TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a Semi-Vitreous nature, will maintain a clean and washable surface.

## FACING BRICKS AND BRICK ORNAMENT OF TRUE TERRA-COTTA, AS ALSO ARCHITECTURAL WORK, IN WHITE AND WARM-TINTED BUFF.

Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





## TENDERS.

## ANDOVER.

For Erection of Buildings and Retort Stack, for the Andover Gas and Coke Co.

## Contract No. 1.

Gibbons Bros., Dudley	£844 13 3
Dempster & Sons, Elland	625 0 0
PORTER & Co., Lincoln (accepted)	615 0 0

## Contract No. 2.

Gibbons Bros., Dudley	329 4 2
PORTER & Co., Lincoln (accepted)	302 10 0

## BARROW-IN-FURNESS.

For Two Houses, Abbey Road, Barrow-in-Furness. Mr. A. H. GOODALL, Nottingham, Architect.

## SADDLER (accepted).

## BLACKBURN.

For Shops for Messrs. Sagar, Blackburn. Messrs. MYRES, VEEVERS & MYRES, Architects, Preston and Westminster. Quantities by the Architects.

Fielding & Sons, Blackburn	£9,609 1 4
Walmesley, Preston	7,073 8 10
Brownley, Chorley	6,520 6 0
Parker, Daisyfield, near Blackburn	6,227 5 0
Stones & Sons, Blackburn	6,100 0 0
Ramsbottom & Son, Accrington	6,030 0 0
Jbbotson, Blackburn	5,892 10 0
Whittaker, Blackburn	5,799 0 0
Keeley, Blackburn	5,729 0 0
Livesey, Blackburn	5,686 0 0
Kenyon & Moulding, Blackburn	5,662 0 0
W. & T. Arkwright, Blackburn	5,600 0 0
HIGSON & Sons, Blackburn (accepted)	5,585 0 0
Craven, Blackburn	5,459 0 0
J. Byron, jun., Blackburn	5,387 13 0

## BRIDLINGTON QUAY.

For Deepening and Improving Bridlington Quay Harbour and Construction of Fish Wharf. Mr. BOHN, C.E. Engineer.

MOFFATT & SON, Paisley (accepted)	£3,644 7 0
Re-decking North Pier.	
RENNARD (accepted).	

## BUDLEIGH SALTERTON.

For Building Wesleyan Sunday School, Budleigh Salterton. Mr. W. H. WELLS, Architect, Budleigh Salterton. Quantities not supplied.

Tregenna	£950 0 0
Casely	780 0 0

## CEFN COED.

For Building Residence at Cefn Coed. Mr. JOHN WILLIAMS, Architect, Merthyr.

Williams	£295 0 0
Lumley	960 0 0
Jones	883 0 0
Gabe	880 0 0
JENKINS (accepted)	880 0 0

## All of Merthyr.

## CARLOW.

For Constructing Concrete Tank for Gasholder, for the Directors of the Carlow Gas Company.

Thompson Bros., Wexford	£410 0 0
Byrne, Carlow	333 13 4
DODD, BECKETT & Co., Dublin (accepted)	260 0 0

## CHICHESTER.

For the Construction of Sluice, Sluice Culverts, &c., on the foreshore of Bracklesham Bay, Selsey, for the Commissioners of Sewers of Western part of Sussex. Mr. A. S. HAMAND, Engineer, Palace Chambers, Westminster.

Hayter, Portsmouth	£1,650 0 0
Cooke & Co., Battersea	1,500 0 0
Trowsdale, Lewisham	1,204 10 4
Chamberlain, Arundel	1,093 6 0
Bevis, Portsmouth (accepted)	900 0 0
Eatough, Selsey	890 14 0
Dearle, Eastbourne	767 6 3

## COBHAM.

For Cemetery Chapels, Boundary Fences, &c, Cobham, Surrey. Mr. GEORGE H. BIRCH, Architect, 68 Lincoln's Inn Fields, W.C. Quantities by Mr. T. Warner Goodman, 9 Buckingham Street, Strand, W.C.

Messom, Twickenham	£1,637 0 0
Dove Bros., Islington	1,495 0 0
Batchelor, Leatherhead	1,393 0 0
Goddard, Farnham	1,317 0 0
Faulkner, Walton-on-Thames	1,300 0 0
Wood, Cobham	1,284 0 0
Woods, Weybridge	1,185 0 0
Newland, Cobham	1,050 0 0

## DERBY.

For Building Workshops and Converting existing Workshops into Stabling, Derby. Mr. THOS COULTHURST, Borough Surveyor, Architect. Quantities by the Borough Surveyor.

Bakewell	£553 10 11
Thompson	537 3 0
Parker	454 19 11
Slater	460 10 4
Walkerline	451 16 8
BROWN (accepted)	480 18 10

## FRODINGHAM.

For Works at the New Cemetery, Frodingham. Messrs. BELLAMY & HARDY, Architects, Lincoln.

Houghton, Godby	£1,830 0 0
Prumby, Sheffield	1,826 0 0
Tomham, Grimsby	1,300 0 0
Crosby & Sons, Lincoln	1,279 0 0
Kendall, Market Rasen	1,239 0 0
Fletcher, Cleethorpes	1,236 0 0

## BURTON.

For Construction of Abutments of Bridges over the Trent to the Ox Hay Recreation Ground, Burton.

KERSHAW (accepted) . . . . . £163 3 0

## GLASGOW.

For Additions to Lillyburn House, Milton of Campsie, near Glasgow, for Mr. A. McNab. Mr. JOHN B. WILSON, A.R.I.B.A., Architect, Glasgow. Quantities by Mr. W. J. Hall, Glasgow.

## Accepted Tenders.

Fletcher Bros., Kirkintilloch, mason	£323 6 8
Ferguson, Glasgow, wright	676 0 0
Bruce, Glasgow, plumber	100 0 0
Caldwell & Sons, Kirkintilloch, slater	38 19 3
Bryden & Sons, Glasgow, gas and bells	23 19 1
Plasterer (not estimated)	270 0 0

For New Headquarters, Gymnasium, and Drill Hall for 3rd Lanark Rifle Volunteers, Glasgow. Mr. JOHN B. WILSON, A.R.I.B.A., Architect, Glasgow. Quantities by Mr. W. J. Hall, Glasgow.

## Accepted Tenders.

Paterson, Glasgow, mason and brickwork	£1,478 5 0
Wyper, Glasgow, wrightwork	839 0 0
P. & R. Fleming, Glasgow, iron roof	650 0 0
Lowe, Tamworth, wood block floor	360 0 0
J. & T. Stewart, Glasgow, slater	146 10 10
Bruce, Glasgow, plumber	120 0 0
Nicol & McVicar, Govan, plasterer	102 6 10
Bruce, Glasgow, gasfitting	64 0 0

A description and illustration of the work will be found in *The Architect* of April 5.

## GRAYS THURROCK.

For Erection of Two Houses in Grove Road, and One House in Bridge Road, Grays Thurrock, for Mr. Jas. Seabrooke. Mr. E. CLERK ALLAM, Architect, Romford.

GOLDEN (accepted) . . . . . £700 0 0

## GREAT YELDHAM.

For the Restoration of Great Yeldham Church. Mr. FRED. CHANCELLOR, Architect, 20 Finsbury Circus, and Chelmsford.

Brown & Co.	£1,055 0 0	Extra if have roof executed in oak.
Grimwood & Son	1,061 10 0	118 0 0
Litch	982 0 0	155 0 0
Mason & Son	1,025 5 0	76 0 0
GRIMES (accepted)	970 9 0	111 0 0

## HERTFORD.

For the Construction of Sewers, &c., Fore Street, Hertford. Mr. W. H. WILDS, Borough Surveyor.

## Sewers.

Maycraft	£5,102 7 2
Bell	2,621 0 0
Catley	2,595 0 0
Bottoms Bros.	2,571 14 1
Botterill	2,422 0 0
Gray	2,274 2 3
Bath & Blackmore	2,256 0 0
Underwood	2,093 0 0
J. W. & J. Neave	2,073 6 5
Beadle Bros.	2,027 0 0
Dickson	1,994 14 0
McKenzie & Co.	1,979 0 0
Norris	1,950 0 0
Young	1,798 0 0
Frayne & Co.	1,264 19 10

## Macadamising the Roads.

Bottom Bros.	1,025 10 0
Bell	861 0 0
Catley	650 0 0
Dickson	622 0 0
Maycraft	601 0 0
Botterill	559 0 0
Bath & Blackmore	500 0 0
Norris	496 16 8
McKenzie & Co.	425 0 0
J. W. & J. Neave	411 16 3
Underwood	369 0 0
Gray	368 19 2
Beadle Bros.	359 0 0
Young	273 11 11
Frayne & Co.	189 0 0

## INVERNESS.

For excavating Channel and other Works for Lowering Level of Loch Moy. Mr. J. FRASER, Engineer, Inverness.

MacKay & Son, Broughty Ferry	£7,794 12 4
Macpherson, Inverness	6,966 10 6
MacDonald & Son, Hawick	5,535 15 0
Russell, Bearsden	5,226 10 0
Fraser, Inverness	4,398 0 0
Walker, Greenock	4,965 19 10
Scott, Inverness	4,913 3 2
Duncan, Leith	4,878 10 8
Wellwood & Co., Glasgow	4,642 0 0
Jamieson, Greenock	4,562 4 8
MacDonald, Killin	4,561 7 2
Scott, Killin	4,127 15 4
Coghill & Co., Glasgow	4,059 3 10
MacDonald, Inverness	3,970 3 0
Glen, Kilsyth	3,928 9 2
Moffatt & Son, Paisley	3,634 9 8
PIRIE, Aberdeen (accepted)	3,531 17 10

## KINNERSLEY.

For Restoration of Kinnersley Church, Salop. Mr. JOSEPH FARMER, Architect.

Paterson & Sons, Wellington	£617 17 6
Smith, Broseley	597 0 0
Whittingham, Newport	555 0 0
Yates, Shifnal	470 0 0
Parker	428 0 0

## KING'S LYNN.

For Additions and Alterations to Burleigh House, King's Lynn. Mr. JOHN ASHTON HILLAM, Architect, King's Lynn.

Bennett Bros., Downham	£1,471 0 0
Jarvis, Lynn	1,433 0 0
Daves	1,369 0 0
Brown, Lynn	1,360 0 0
Foreman, Lynn	1,349 0 0
Geach, Lynn	1,336 0 0
Wanford	1,309 0 0
Bardel Bros.	1,300 0 0

## KIRK WALL.

For Building Town Hall and Post Office, Kirkwall. Mr. T. S. PRACE, Architect, Kirkwall.

BAIKIE, Kirkwall (accepted) . . . . . £3,993 0 0

## LENNOXTOWN.

For Execution of Work in connection with the Lennox-town Water Supply, for the Campsie Local Authority.

BLACK & EADIE, Johnstone (accepted) . . . . . £899 13 11

## LONDON.

For Painting and Repairs to House at Denmark Hill, S.E. Messrs. GEORGE LANSDOWN & HARRISS, Architects.

Bartholomew	£301 11 7
Hall, Biddall & Co.	288 0 0
H. & E. Lea	252 0 0

For Alterations, &c., to Four Houses, Muswell Road, Hornsey, for Mr. Sydney Smith. Mr. J. W. STEVENS, Architect and Surveyor, 1 Dyer's Buildings, Holborn, E.C.

STEED . . . . . £120 15 0

CARTER & SON (accepted) . . . . . 81 6 0

For New Wing and Alterations at Froggnal Rise, Hampstead (first section). Mr. MARSHALL N. INMAN, Architect, 7 Bedford Row, W.C.

Lamb	£290 0 0
Benstead & Sons	629 0 0
Simpson & Son	621 0 0
SAYERS (accepted)	577 0 0

For Laying Down Granite Carriage-ways and York Stone Footways in the Streets embraced in the Little Coram Street, Bloomsbury, Artisans' Dwellings Scheme.

Mowlem & Co.	£1,638 0 0
Turner	1,575 0 0
Griffiths	1,447 0 0
NOWELL & ROBSON (accepted)	1,298 0 0

For Construction of Brick Sewer (312 feet), Talbot Grove, Notting Hill. Mr. W. WEAVER, Surveyor.

E. & W. Iles	£455 0 0
Higgett & Brown	450 0 0
Bentley	450 0 0
Cooke & Co.	440 0 0
Mears	415 0 0
Wilkinson Bros.	407 0 0
Nowell & Robson	397 0 0
Felton	397 0 0
ROGERS & DICKENS (accepted)	397 0 0

For Erection of Stable and Coach-house, Hampstead. Messrs. TUNLEY & Co., Architects. Quantities by Mr. H. Lovegrove.

Sabey & Son	£898 0 0	With extra room.
Burford & Son	870 0 0	£938 0 0
Tarrant & Son	856 0 0	907 0 0
Holliday & Greenwood	877 0 0	887 0 0
Outhwaite & Son	814 0 0	843 0 0

For Additions and Alterations, 3, 4, 5, and 6 Wilton Road, Pimlico. Mr. GEORGE EDWARDS, Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.

Green	£1,698 0 0
Reading	1,588 0 0
Nightingale	1,580 0 0
Scrivener & Co.	1,459 0 0
Martin, Wells & Co.	1,360 0 0
Scharien & Williams	1,280 0 0
STIMPSON & Co. (accepted)	1,280 0 0

## NEW SOUTHGATE.

For proposed Detached Villa, Bowes Road, New Southgate, for Mr. A. D. FRASER. Mr. J. W. STEVENS, Architect and Surveyor, 1 Dyer's Buildings, Holborn, E.C.

Holt & Garlick	£2,549 19 7
Knight	1,450 0 0
Brown & Sweetland	1,430 0 0
Smith & Son	1,369 0 0
Newby	1,300 0 0
Fairhead	1,273 0 0
Life	1,265 16 8
Tibbitts (too late)	1,249 0 0
Pryor	1,150 0 0
Kerry	1,150 0 0
Read	1,147 0 0
Johnston	1,091 0 0

## NOTTINGHAM.

For Stables and Coachhouses, Ashley Street, Nottingham. Mr. A. H. GOODALL, Architect.

J. Price	£502 0 0
Scattergood	395 0 0
Marshall	394 10 0
Fisher, Hutchinson & Ashling	380 0 0
Mann	377 10 0
Cooper	366 0 0
Cuthbert Bros.	337 10 0
Ireson, Wade & Gray	320 0 0
J. F. PRICE (accepted)	325 0 0

## STOURBRIDGE.

For Pair of Boilers for the Pumping Station for the Stour-bridge Main Drainage Board.

WATTS & Co. (accepted) . . . . . £408 0 0



## OSSETT.

For Building Shed at Brook's Mills, Flusshdyke, Ossett.  
Mr. R. S. FIRTH, Architect. Quantities by the Architect.

## Accepted Tenders.

Lockwood, Ossett, mason and bricklayer	£240	0	0
Land & Nettleton, Ossett, carpenter and joiner	200	0	0
Hainsworth, Dewsbury, ironfounder	100	0	0
Fawcett, Dewsbury, blue slater	87	0	0
Hapworth & Spence, Ossett, plumber and glazier	29	10	0
Snowdon, painter, Ossett	5	10	0

## PLYMOUTH.

For Mount Street Board School. Messrs. HINE & ODGERS, Architects, Plymouth.

Stanlake	£8,230	0	0
Pethick Brothers	7,821	0	0
Blowey	7,552	0	0
Berry	7,373	0	0
Palk & Partridge	7,282	0	0
Mitchell	7,270	0	0
Reed	7,200	0	0
Piper	7,165	10	0
Finch	7,151	0	0
Lethbridge & May	7,110	0	0
King	6,350	0	0
Harley	6,162	0	0
Debnam (for Matcham & Co.)	5,904	0	0

## Alternative Tenders.

Stanlake	£8,035	0	0
Pethick Bros.	7,562	0	0
Blowey	7,365	0	0
Berry	7,098	0	0
Mitchell	7,029	0	0
Piper	7,014	0	0
Palk & Partridge	6,947	0	0
Lethbridge & May	6,939	0	0
Reed	6,930	0	0
Finch	6,855	0	0
King	6,240	0	0
Harley	6,010	0	0
Debnam (for Matcham & Co.)	5,780	0	0

## TWICKENHAM.

For the Enlargement of Archdeacon Cambridge's Schools, Twickenham. Messrs. GEORGE LANSDOWN & HARRISS, Architects, 5 & 7 Warwick Street, Charing Cross.

Messom	£1,717	0	0
H. & E. Lea	1,627	0	0
Collings	1,620	0	0
Sims	1,575	0	0
J. & P. Hermon	1,530	0	0
Wood	1,467	0	0

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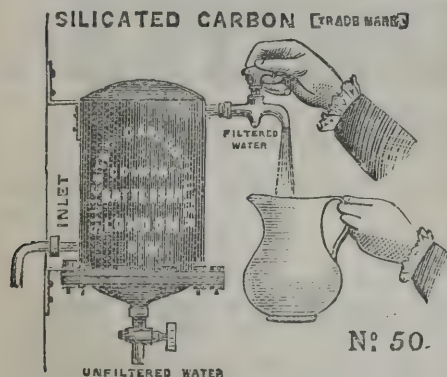
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## RASTRICK.

For Erection of a Villa Residence, near Badger Hill, Rastrick, Yorkshire, for Mr. Albert Smith. Mr. R. F. ROGERSON, Architect, Brighouse.

## Masons.

Hopkinson & Sons, Halifax	£345	0	0
Carr, Low Moor	320	0	0
Empsall, Brighouse	272	0	0
Crowther, Rastrick	270	0	0
Cordingley, Idle	268	0	0
FEARNLEY, Clifton (accepted)	263	0	0
Crossley, Hove Edge	236	0	0

## Joiners.

Bentley, Rastrick	220	0	0
Furness, Greetland	206	6	3
Wadsworth, Southwram	190	0	0
Rayner, Rastrick	189	2	5
Sykes & Sons, Brighouse	180	0	0
Crowther, Brighouse	177	0	0
Deacon, Shipley	174	0	0
BELL & SHAW, Rastrick (accepted)	159	9	0

## Plumbers.

Shaw, Rastrick	87	10	0
Wood, Brighouse	83	0	0
Lawson, Brighouse	89	14	9
Brook, Brighouse	79	19	6
Garton, Huddersfield	79	15	0
Horsfall, Elland	77	0	0
Brook, Heckmondwike	74	4	0
Aspinall, Elland	70	0	0
Walton, Low Moor	70	0	0
S. & W. Jagger, Elland	67	19	9

## Plasterers.

Jowitt, Huddersfield	49	18	0
Clarke, Rastrick	41	0	0
Gledhill & Barraciough, Brighouse	41	0	0
Collins, Out Lane	40	0	0
Heponstall, Brighouse	36	4	0
ANDERSON & HOYNES, Brighouse (accepted)	34	0	0
Shaw, Mirfield	33	0	0
Firth Bros., Brighouse	31	10	0
Wood, Brighouse	28	10	0

## Slaters.

Goodwin & Sons, Huddersfield	49	10	0
Jowitt, Huddersfield	48	5	0
Pycock & Sons, Leeds	47	16	0
SMITHIES, Bradford (accepted)	45	0	0
Firth Bros., Brighouse	45	0	0
Shaw, Mirfield	45	0	0

## Slater and Plasterer.

Hutchinson, Elland	94	0	0
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## WETHERAL.

For Building Detached House at Wetheral, near Carlisle.  
Mr. JAMES MURCHIE, Architect, Carlisle.

## Accepted Tenders.

Metcalfe, Carlisle, builder	£550	0	0
H. & R. Court, Carlisle, joiner	274	2	0
Nanson, Carlisle, slater	60	0	0
Anderson, Carlisle, plumber	34	8	0
Ormerod, Carlisle, plasterer	78	0	0
Kirk & Robley, Carlisle, painter and glazier	44	0	0
Total	£1,049	10	0

## WHITBY.

For Building the West Cliff Church, Whitby. Mr. JOHN-SON, Architect, Newcastle.

## Tenders, including Oak Seating.

Simpson & Malone, Hull	£19,626	16	6
White, Whitby	10,518	4	6
Johnson & Sons, Middlesbro'	18,747	8	0
Langdale & Sons, Whitby	17,516	7	0
Kyle, Barnard Castle	16,803	17	4
J. & W. Beanland, Bradford	16,768	0	0
Sanderson, Durham	16,184	0	0
Bentley, Leeds	15,783	2	11
Scott & Sons, Sunderland	15,633	0	6
Brown, Whitby	15,039	12	3
Burton, Newcastle	14,606	0	0
Thorpe, Leeds	14,593	5	0
Wood, Pickering	14,393	5	0
Hodgson, Malton	14,093	18	6
PADBURY & SONS, Scarborough (accepted)	13,937	10	7
Clark, Park Stone	13,673	0	0

## The following do not include Oak Seating.

Brelsford, Leeds	16,949	16	0
Dickinson, Saltburn	13,438	0	0

## WIGAN.

For Erection of the 4th Lancashire Rifle Volunteer Drill Hall, Wigan. Messrs. ISITT & VERRITT, Architects, Bradford and Wigan. Quantities by the Architects.

France & Smith	£2,644	0	0
Holmes	2,575	0	0
Winnard	2,527	0	0
W. & A. Bywater	2,514	0	0
Wilson	2,512	0	0
Preston	2,497	0	0
JOHNSON (accepted)	2,475	0	0

The above include ironwork let to Mr. Handysides, of Derby.

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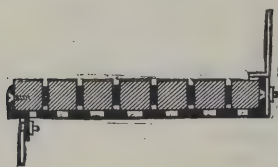
# LINDSAY'S

## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

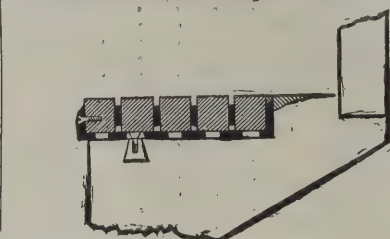
### FOR EVERY DESCRIPTION OF STAIRCASE.

THIS Patent is an improvement on the well-known wooden block construction, and its speciality is that the wooden blocks in each Tread can be removed and transposed so many times that it is almost indestructible besides being noiseless.

No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.



In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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# The Architect.

## THE ADMIRALTY COMPETITION.



NOW that people have had a little time to reflect upon the result of the "preliminary canter" in the pending competition, it is as plain as ever it was in any former contest that the majority of the competitors consider themselves to be very shamefully used. It is all very well for outsiders to laugh; they have laughed before and will laugh again; but the aggrieved parties protest that it is no laughing matter, and they ought to know. What these now say is that, whereas in previous competitions of this high order it has always been some sort of leading men in the profession who have taken the lead on the list, in the present case all the leading names, without exception (and it is said there were a good many), are struck off at the start, as if they were names of nobodies, and the approved designs (the judges, for some contemptuous reason, not even selecting the full number) are those of men who may be called unknown. Now we beg leave, while sympathising sincerely with all who are disappointed, to argue that this complaint is scarcely a reasonable one, and indeed that it is precisely what ought to be expected to arise in a thoroughly healthy competition—if a competition can ever be a healthy thing. This case, in short, seems to demonstrate once more, what was surely sufficiently proved at Glasgow, if not again and again before, that the special virtue of a great public contest of the kind must always be that it brings to the front, without respect of persons, those who could not have expected it, and whose success is therefore an accident, while it throws out with the same emphatic impartiality any number of those who made sure of victory, and whose failure is all the more deserved. Something like this is the very object of a competition—to pull down the mighty from their seats and to exalt the humble and meek; and if this kind of morality does not commend itself to the thoughtful and generous reader, we pray that he will be pleased to assign the blame not to us but to the system we are discussing. Commercially unsound from the beginning, it must be commercially unsatisfactory at the end; and, as only one can be the winner, there must always be an overwhelming majority against him.

But it is not only commercially that we ought to regard a great national competition; in fact it ought perhaps not to be entered into on commercial ground at all, but patriotically alone and for the sake of fame. One hundred and twenty-seven architectural designers, or special combinations of architectural designers in most cases apparently (for eight out of the nine selected designs in this case very significantly carry partnership names), have sent in their respective projects at the invitation of the Government; with what object in view? By the time they had pored and pondered over the problem of design for half a year, few of them could have been so foolish as not to perceive that the immediate reward they were contending for was the mere distinction of being placed on the list of recognised merit. Anyone can see that it might be good policy for quite half of them now to be content with the very considerable personal prestige they have gained, and to trouble themselves no more about a race where the odds against their final success are almost a certainty. Far be it from us to suggest that a retiring competitor in such circumstances has the opportunity of persuading himself and his admirers that only his own modesty has stood between him and the final victory; but it is an idea worth reflecting upon at any rate, as apparently a new element in the readjusted form of public competitions, that a prudent young man with little to do, who is not so weak as to believe that the Government and Parliament would ever entrust to him the control of a great national work because of his having produced an attractive set of drawings, has it in his power nevertheless to acquire a highly advantageous position before the world at large, by simply contenting himself with the honour of a share in these preliminary successes, possessing whatever value he himself may be pleased to claim.

The patriotic view of the question, also, is by no means to be overlooked. When one hundred and twenty-seven designs are presented gratuitously to the Government for a great public edifice, even from amongst "a nation of shopkeepers," it is no departure from the ground of strict common sense to say that many of the designers must have permitted themselves to be actuated to a great extent, and some of them altogether, by a direct desire to afford to a great national enterprise what help they might possibly be able to render, if only by a chance hit; in fact, the chance hit is manifestly one of the most important considerations in the theory of all such competitions of design. We hope, therefore, we may be allowed to claim this degree of credit for the disappointed competitors, and this consolation for them also, that they have responded to the call for the best design for a great national building most liberally; and no doubt we may be further allowed by all right-minded observers to suggest that the non-approval of so many projects submitted by architects of eminence is a proof of the great ability that has been brought to bear upon the competition generally, and perhaps of the extraordinary efforts that have been made by less eminent men, as represented by the work of the more successful competitors.

But there are two considerations which seem to be calculated to awaken anxiety. The first is the rumour that the ground upon which the selection of the nine designs has been made is their accidental accordance with a previously approved model of arrangement for the plan. It is further supposed to be probable that the officials of the Office of Works had actually prepared a definite design of their own on this basis before the competition was instituted. Without attaching any great importance to such suspicions, we may at any rate remember what was done at Glasgow, and what was so much complained of in consequence. In that instance, it is true, the plan which had been designed by the surveyor to the Town Council under their instructions was frankly published, and a copy supplied to each competitor. It would be mere flattery to say that it was in itself a bad plan, for it was a very bad plan indeed. But it became clear enough in the end that the general disposition as thus suggested was in fact settled beforehand; and, to make a long story short, it is alleged that the design eventually selected as the best in absolute merit was simply the cleverest conversion of Mr. CARRICK's project into feasible form, a result which in such circumstances is more likely than any other to take place. In the case of the present Admiralty competition it is broadly asserted that the one hundred and twenty-seven sets of drawings, or so many of them as were worthy of any consideration, were without difficulty divided into two classes with reference to a certain fundamental principle of arrangement settled beforehand, and that the nine fortunate ones were merely those which constituted one of these classes, the whole of the rest constituting the other. It is not that we venture to object in any way to this summary mode of dealing with the problem practically; we are quite ready to believe, if so assured by Messrs. CHRISTIAN & HARDWICK, that it was the only way to deal with it; but when the rejected competitors argue that this implies a sort of *suppression veri* in the conditions of competition, what is the answer?

The second point to which we have to refer is what appears to be a degradation of the transaction to the low level of the reception of so many tradesmen's tenders. Nothing, we submit, can in any case redeem a high class public competition of architectural designs from this charge except an exhibition of the designs before the adjudication is made. Whatever may be the inducements to preserve secrecy, they cannot be of any consequence to the object which the promoters of the competition have in view, namely, the obtainment of the most advantageous design that can be got; and it is an accepted constitutional principle in all our public affairs that publicity is the best safeguard against unfair dealing, whether intentional or unintentional. In the great competition of 1857 for the Government Offices in Whitehall, the designs were publicly exhibited for a considerable time, and the criticisms of the press were allowed to be published without reserve. Not only so, but the authorship of most of the best designs was openly identified. Nevertheless—let us say, indeed, in consequence of all this—when the adjudication was at last made, although private disappointments were many, the result was accepted with very little, if any, objection, and, wherever it was found to be at variance with public expectation, a sufficient reason soon became discernible. To refer again to the Glasgow case, we need



scarcely remind the reader that Mr. BARRY was credited with having adjusted the arrangements so as to suit the express purpose of avoiding criticism; and we submit that this, however convenient for the judges, is most dangerous to the cause, if not, indeed, in a certain sense, wanting in courage, courtesy, and honour. The interested public and the competitors have had no means of satisfying themselves to this day of the superiority of the accepted design over the others, and this notwithstanding the very unusual circumstance that the adjudicators, as they actually said in their report, had no difficulty in selecting it, even at the preliminary stage, as the one of super-eminent merit.

The next time we have a great competition, might it not be worth while to try the principle, if only as a good honest "English" principle, of unreserved and uncompromised publicity? Let every drawing be plainly signed by its author, and let the whole collection be openly exhibited, and we venture to think public criticism will take care of all the rest, whatever may happen. In the present case we should be disposed to advise Mr. SHAW-LEFEVRE to accept the risk of exhibiting the whole collection of designs at once, with the authors' names appended; and even if it should become necessary in consequence to revise the selection—a result which we have not in our mind at all—what would be the harm?

### THE METROPOLIS GOVERNMENT BILL.

THE Bill introduced by Sir WILLIAM HARCOURT for the municipal government of the metropolis has been drawn with no small skill; for, while seeming to disturb but little, it is calculated in reality to effect enormous changes. It was always understood that the aim of the measure would be the constitution of one vast municipality for the whole metropolis, and that the creation of a series of distinct authorities would not be advocated, and this is the shape actually taken by the Bill. The three million eight hundred thousand people within the limits of the present Metropolis Management Act might easily have been formed into several corporations, each embracing interests as large as those of a first-class provincial city; but the expediency of such a step, and its advantages and disadvantages as compared with the erection of a single municipality are not what at this moment we propose to consider. The Bill proposes, as we have said, to embrace all London under one Corporation, and seeks to appear to do so by expanding the ancient Corporation of London, and not by ostensibly destroying every existing organisation and making a fresh start. The Metropolitan Board of Works which, it is true, has not the prestige due to ancient establishment, though it well deserves the credit of having done excellent public work since its creation in 1855, is to be superseded, or perhaps it may be with more accuracy said, is to be swallowed up; and the aldermen of the City of London are to disappear. Nor is the list a short one of the public bodies whose duties and attributions it is proposed shall be absorbed by this municipality. Still, there is to remain a Lord Mayor and a Common Council; and, at the first blush, the general feeling has been that the measure was not so revolutionary as had been anticipated. A closer examination will hardly justify this opinion, as we shall endeavour to show.

The body proposed to be created, if in name the same as the Common Council of London, is to be in nature neither the Common Council nor the Metropolitan Board; nor any fusion of them, but a totally new body, elected in a different manner and likely to be animated with a different spirit. Upon this body is to be cast the duty, among other things, of introducing Bills into Parliament to effect those many reforms (not to say revolutions) with which the Home Secretary is too prudent to burden his measure, but which he is anxious to see introduced. No more revolutionary policy, however conservative in appearance, can be in reality thought of or proposed than first to create a new broom and then to commit the wide area of London to its tender mercies, to be swept as clean as it sees fit. We believe that the apparent moderation of the Bill, with these provisions attached to it, is more formidable, and foreshadows a larger measure of ultimate change, either for good or for evil, and calls for closer scrutiny than would have been needed by such a Bill as it was in many quarters anticipated would be brought in by the Home Secretary.

The limits of London for the purposes of this Corporation

are to be those of the Metropolis Management Act, and the new municipality is to consist of 240 common councilmen elected by the burgesses, and to hold office for a period of three years. The School Board for London probably presents some idea of the class of members who will be obtained under this system, and its debates and methods of management may give some clue as to those which will prevail in the new Common Council. We may hope that the disturbing elements which have been so prominent in the School Board discussions may not present themselves in this new council chamber; and we may hope also that the steady deterioration which careful observers have detected in the School Board at each triennial election, may not have to be apprehended in the case of the London Council; but there appears reason to suppose that the same causes which have tended to diminish, at each election, the number of first-class men willing to occupy seats on that board, or able to secure them, are not unlikely to operate in the case of this new London Parliament.

There will be a Lord Mayor and a deputy mayor, but no aldermen; and the abolition of these influential persons will assimilate the working of the new Corporation to that of the Metropolitan Board rather than to that of the present Corporation. This change is to be regretted; if for no other reason because it will do away with a valuable means of attracting men of ability and experience of affairs to take part in public business by abolishing an office of great honour to which they could aspire. Into this Council, elected by popular vote, and of which all the members are to have equal rank, will be merged *inter alia* the powers of the present Corporation, the Metropolitan Board of Works, all Vestries and District Boards, Paving Commissioners, Burial Boards, Commissioners for Baths and Washhouses and for Public Libraries, and the administrative powers of the Justices of Middlesex, Surrey, and Kent, and of the City Commission of Sewers. There are, however, to be what are called District Councils, which will, in effect, perform some, if not most, of the duties now assigned to District Boards and Vestries.

A kind of interim council of 240 members, to consist of the existing 46 members of the Metropolitan Board, of 44 members elected by the Common Council, and of 150 elected by the general body of burgesses, is to make arrangements for the transfer of London from the existing authorities to the new ones; and probably this transitional body, which will act as a sort of introduction of individual men to the new constituency, has been proposed with a view slightly to disarm the apprehended opposition of the members of the Metropolitan Board.

As has been stated already, when this unwieldy Corporation is once constituted, the duties cast upon it by the Bill will include dealing with new matters of the utmost importance, as well as with ordinary municipal work; and in this respect Government is only following the precedent set by the establishment within the House of Commons itself of grand committees, upon whom work can be devolved which—at present, at any rate—the House itself cannot undertake.

It appears that the Common Council is to be required to submit Bills to Parliament for, among other purposes, the purchase and regulation of London waterworks and gasworks, or the provision of a new supply of water or of light, for the regulation of cabs and omnibuses, and for the abolition of the Irish Society; and they may, without recourse to Parliament, make alterations in the limits of London, in their own constitution and duties, and apparently in almost every matter of interest entrusted to them, by means of schemes; and such schemes, when approved by the Local Government Board or the Secretary of State, and confirmed by the Queen in Council, will then acquire the force of law.

There can be no kind of question that a series of delegates elected by popular vote, and whose proceedings will be reported in the newspapers, will be anxious to justify their own existence by doing something; and, as pulling down is a great deal easier than building up, there is little doubt that many of the existing methods of carrying on public work, which by lapse of time have become well adapted to the purposes which they have to perform, will be in danger of being changed, superseded, or abandoned with, at least, doubtful advantage. We see, for example, nothing in the abstract of the Bill which directly affects the status of the district surveyors, but there can be no doubt that it will be competent for the new Board to propose, and by means of a "scheme," to effect changes in their qualifications or remuneration or duties, such as might



entirely alter the administration of the Building Act ; and, if this were done, the effect of the alteration might, and probably would, be felt by every builder in the metropolis, as well as by every present and future district surveyor. In the same way the obligation laid upon the Corporation of dealing with not only the water supply—in respect of which there has been much complaint—but the gas supply—in respect of which there has been none—will no doubt tend to point out to the more adventurous spirits the gas and water companies and their undertakings as objects of early attack. These will be dealt with in the first instance not in the old-established and well-understood Parliamentary manner, but by a public body guided by no precedents, and having as yet no settled mode of procedure ; and a measure may well be brought up to the House of Commons, the merits of which have not been properly sifted, which will enjoy the advantage of being held to be a public Bill, and in favour of which the very considerable weight due to the source from which it will originate cannot fail to tell, perhaps unduly.

The magistracy of London are to be put under the new Corporation, and among the proposed changes is one which seems important. Four Deputy Recorders are to be appointed, and two of them are to sit for the purpose of hearing appeals from Courts of Summary Jurisdiction. If this means appeals from the Metropolitan police magistrates' decisions, we cannot doubt that a considerable proportion of such appeals will rise out of cases in connection with buildings, and especially in connection with the Metropolitan Building Act. The greater part of the time of one such judge (who ought to have a skilled architect and surveyor as his assessor) might well be devoted to such cases, and if the judge were one of the few barristers who understands buildings and building law well, and his assessor a man of good practical experience, the establishment of such a court would be hailed as a boon by very many of those engaged in building operations in the Metropolis. A magistrate for building act cases, who would take the pains to understand them, and whose decisions should establish a consistent series of precedents has long been desired. If Sir WILLIAM HARCOURT'S measure shall give us this, or something like it, we shall be grateful.

In conclusion we must point out that if this Bill becomes law in its present shape, the responsibility and the powers of the professional advisers of the Corporation will be even heavier than they have yet been, and the necessity for securing the services of the best architect, the best engineer, the best solicitor, the best counsel, who are to be had for money will be greater than ever before. The Corporation and the Metropolitan Board have been both of them extremely well served. They have been able to secure the services of excellent officers, and have been obliged to commit a vast amount, not only of the detail, but of the principles of their public work into their hands. In the future a far larger, and consequently less handy, body than either of these two will have to assume and do its best to discharge, not only the functions which have been discharged by both the above-named great corporations, but by an enormous number of smaller bodies ; and if it is eager to try its skill with regard to water supply, and do that which the late Government failed to accomplish and the present Government has hesitated to attempt, it will certainly have its hands full. The circumstances of the case will cause a vast amount of detail to be relegated to committees, but the bulk of it will remain to be dealt with by the permanent officers ; and the result will necessarily be that the Corporation will require the aid of officials of the soundest judgment and the greatest capacity if its work is to be done at all. A guarantee that in this respect, however, the administration is not likely to be at a loss, unless it be from *embarras de richesses*, occurs in the fact that all the existing officers of the Metropolitan Board and of the old Corporation are to become officers of the new Corporation, which, however, is to have the fullest powers as to their appointments, duties, salaries, compensations, &c. There are at present in London not a few of what may be called duplicated offices. The two official architects, for example, Mr. HORACE JONES and Mr. VULLIAMY, or, again, the two engineers, Sir JOSEPH BAZALGETTE and Mr. HEYWOOD, are at present discharging very analogous duties each for the body under whom he acts ; and one of the difficulties which will have to be encountered, and requiring most delicate handling, will rise out of the necessity for recognising these double appointments, and properly defining the double sets of duties that are connected with them.

We have, of course, only touched upon the fringe of this great subject ; but we hope we have shown that, large as are the changes obviously introduced, those which may be expected by implication to follow are more extensive still. Among our readers but few can feel sure that this is a subject which may not indirectly affect themselves, however little there may be at this moment the appearance of its touching their interests or occupations ; and all who take any pride or pleasure in the metropolis of England must feel that Sir WILLIAM HARCOURT'S proposals not only merit but demand the closest scrutiny—such scrutiny which should be the more jealous because the institutions which it is proposed to supersede are at present doing the work of this metropolis in a manner which we believe will compare not unfavourably with similar work in any capital in Europe or, we may add, America.

## STUDIO NOTES.

AFTER completion of a work so elaborate and extensive as the *Anno Domini*, Mr. LONG, R.A., has of course no important picture ready for this season. But the three studies of Oriental beauty, on which he has bestowed careful manipulation, of a somewhat more solid kind than is often his wont, will commend themselves by the same sensuous grace and rich accessories that have heretofore won popular favour. The subject-title assigned to these figures does not really affect them more than the fancy names that used to be bestowed on ladies of title by courtly portrait painters in the days of REYNOLDS, or by the French WATTEAU or BOUCHER. Or, to come nearer the mark, Mr. LONG'S figures are typical rather than individual ; just as one may see a MIRIAM, an ESTHER, or a VASHTI any day in a Jewish colony, or a CLEOPATRA or ZENOBIA by the waters of the Nile. The painter's types are, however, genuine *pur sang* ; he does not produce a negro from a Christy Minstrel, or an Assyrian belle from a London model.

That favourite among animal-painters of the day, Mr. BRITON RIVIERE, R.A., will be very strong in a large picture of the king of beasts—a truly regal lion standing proudly indifferent amidst a throng of fawning and yelping jackals. The too human touch which so constantly turns character into caricature in the treatment of animals, has been artistically restrained here, and this beast, though “every inch a king,” is still true to his quadruped nature. The picture naturally comes into competition with the less schooled but energetic work of Mr. NETTLESHIP, in last year's Grosvenor, the blind lion at the edge of the precipice, with the jackals behind him. Mr. RIVIERE has also a fresh version of *The Magician's Doorway*, and other less notable work.

To turn to the studio of Miss EVELYN PICKERING is an abrupt change. This clever disciple in modern Mediævalism does not alter her style. Her chief picture for the Grosvenor Gallery is a subject from the Italian poet, to the effect that, with Old Age creeping into view, and Death a dread shadow chilling the blood, it is best to love while the blessed moment is with us. So here a pair of lovers gaze into one another's eyes with a pathetic kind of passion in the presence of Love, while far away in the distance we see a figure bent by age and sorrows, and behind it a ghostly impersonation of Death as a female, with huge wings feathered like a bird, and the fatal scythe in hand. A landscape with winding river, cypresses, and volcanic rocks, reminiscent of Italy and of Tuscan back-grounds, fills up the picture. Miss PICKERING'S figures are still attenuated, angular, and languid, depending upon the expression thrown into attitude, the beauty of extremities, and the yearning, passionate type of countenance ; depending also upon draperies cast with exceeding care in the lines of the figure, and coloured with the rich but subdued isolated tints in which this young artist excels. Her colouring is indeed exceptionally good, lustrous with a sombre splendour, and varied in harmonious appositions. She belongs to a school of mannerism and has no claim to originality of mode, but her sense of design is often strikingly fine, and her power of expression concentrated and intense. She has ready for a forthcoming exhibition of selected pictures at the Fine Art Society's Gallery, a small picture of the *Visitation*—avowedly an imitation of Florentine models—very good in colour. Certain single-figure studies, done with gold point upon purple ground, show the artist in her most original and artistic vein.



Both in dignified conception and firm hand these drawings might be worthily entered in a folio of "old masters." Finally, for the Grosvenor Gallery is a life-size terra-cotta bust study of a *Mater Dolorosa*, executed in a large manner, the drapery about the head finely cast, the face itself of a type somewhat in the tenderer BUONARROTI mould, as in some heads on the Sistine ceiling, or the *Madonna* at St. Lorenzo in Florence, but with a wistful sorrow that is of modern thought. Were it not that this earnest young painter has strength in colour, we have often wished she would give her work to sculpture, to which her sense of design and feeling for line, both in form and drapery, fits her especially.

The clever group of artist sisters, the Misses MONTALBA, are ready with pictures and sculpture. CLARA MONTALBA, the head of the group, has subjects from the watery world of Holland, Venice of the North. In the Whistlerian phraseology, one is an adagio in grey, and the other a cantilena in gold. Holland has drawn the sympathies of the artist, but for all that she is off to Venice again, about which she has not yet said all she has to say. The portrait painter, ELLEN MONTALBA, has a charming upright study of her sister, HENRIETTA, in cream evening dress against a golden background, with her dark hair hanging in a long plait down her back; also another portrait of a lady in a dress of deftly painted soft flame-coloured satin. HILDA MONTALBA has enlarged the sketch of Swedish marsh-land and water under suffused sunset glow, which we noted with admiration in the winter exhibition at the Dudley Gallery, and has painted therefrom a picture of fine gradations and atmospheric quality. The terra-cotta bust of *Robert Browning* by HENRIETTA MONTALBA may be considered successful. It is finely and crisply modelled, but just a little *posé*. One or two female busts have much character and charm.

The prospects of sculpture for the Academy do not seem very promising. Mr. MACLEAN has not finished his figure after TADEMA'S *Spring*. Mr. SIMONDS cannot give us a *Perseus* every year, and has been busy upon his colossal lion for America. Probably a chief point will be made by the fresh start of Mr. HAMO THORNEYCROFT, R.A., who, forsaking classic and scriptural ground, now comes forward with the heroic in rustic life. A life-size figure of a mower, with his scythe slung behind him, is the chief work of the young Academician. The French have done this sort of thing for some time, and done it well, and Mr. THORNEYCROFT'S figure shows the influence of the French school. But it is none the worse for that; the modelling of the bared portions of the figure, muscular arms and chest and throat, and well-formed solid head, is energetic without exaggeration; the difficulties of costume, shirt and trousers and shadowing hat, are so admirably managed that it does not occur to one to remember such garments have been held not fit for plastic treatment. Of course a realistic figure of homely occupation must attain the picturesque rather than the sublime; nevertheless, by a certain simplicity, largeness, and nobility, this mower of Mr. THORNEYCROFT distinctly belongs to the heroic, just as FRED WALKER the painter's peasants and gipsies did. The Greek athlete and the Cornish sailor might exchange occupations, and be found ready to the sculptor's hand in either. The occupation is an accident, of which the beauty of developed strength and endurance in the human form is independent.

### PARIS NOTES.

MANY painters, who have either not sought or have sought and failed to obtain admission to this year's Salon, have determined to hold a free exhibition of their own, open both to works of painting and sculpture. A meeting in furtherance of this project was held at the Salle Montesquieu, on Wednesday evening, when a committee was appointed to organise the affair, and receive subscriptions towards carrying it out.

The Museum of Casts, lately organised in the Trocadéro, under the management of the Committee of Historical Monuments, is to be considerably enlarged. This collection, which is devoted exclusively to the illustration of native art, has been hitherto confined to reproductions of works of the twelfth to the sixteenth century inclusive. At a meeting of the managing sub-committee, held on Monday, under the presidency of M. Antonin Proust, ex-Minister of Fine Arts, it was decided to establish immediately

fresh galleries for the seventeenth and eighteenth centuries. Among the orders already given for this new section of the museum are those for casts of all the decorative sculptures of the Versailles Gardens, of the fronton of the Hôtel de Rohan—now occupied by the National Library—as well as reproductions of all Houdon's busts.

On Saturday last the vote for the Salon jury in the section of sculpture, medallion engraving and jewel engraving took place at the Palais de l'Industrie. The polling, presided over by MM. Etienne, Leroux & Thomas, lasted from ten to four. According to the regulations, the jury must be composed of thirty members, comprising twenty-four sculptors of statues, two of animals, three medallion engravers, and one jewel engraver, with five supplementary jurors. The voting-body consists of all artists that have submitted exhibits in the sculpture section, and three hundred and fifty-nine were found to have exercised their right of suffrage. In addition to the lists recommended by the Association des Artistes Français and the Société Libre des Artistes, seven or eight independent lists were also put forward; but in the main the candidates recommended by the first-named body were successful. The following were the results of the voting:—*Statue Sculptors*—MM. Mathurin Moreau, 274; Paul Dubois, 257; Chapu, 246; Dalou, 245; Barrias, 224; Schoenewerk, 222; Captier, 214; Mercié, 213; Falguières, 207; Guillaume, 201; Thomas, 198; Aimé Millet, 176; Etienne Leroux, 175; Saint-Marceaux, 169; Idrac, 167; Doublemard, 163; Gauthier, 159; Marcellin, 154; Thabard, 150; Cavelier, 148; Hiolle, 147; Gauthier, 140; Delaplanche, 135; and Alasseur, 120. *Animal Sculptors*—MM. Frémiet, 220; and Cain, 217. *Medallion Engravers*—MM. Dubois Alphée, 188; Levillain, 164; and Degeorge, 123. *Jewel Engraver*—M. Galbrunner, 146. *Supplementary Jurors*—MM. Vaudet (jewel engraver), 117; Blanchard, 116; Boisseau, 114; Truphème, 111; and Guilbert, 103 (sculptors).

The subject given by M. Jules Thomas, on behalf of the Académie des Beaux-Arts, for the first section of the second stage in the competition for the Prix de Rome in sculpture is a modelled sketch of *Pandora dowered by the Gods*. The second section of this stage consists in modelling a nude figure from nature, and in their choice of the ten artists admitted to enter *loges* for the final the jury have to take into account the merits of both works of each competitor.

The Roman amphitheatre in the Rue Monge, the site of which had been purchased by the Municipal Council, is being gradually brought to light. The southern portion of the arena and *podium* may be said to be completely cleared, and the labourers are now pushing forward the excavations near the stage. From the construction and arrangement of the building, it was evidently used both for theatrical performances and wild-beast fights. Last week part of the steps near the *vomitorium* were discovered. It is hoped, moreover, that when the arena is entirely cleared many vases, coins, and arms may be found.

Photographs of the buildings about to be demolished to make way for the Rue Etienne-Marcel, a new thoroughfare, have been taken by order of the Prefect of the Seine. Three different views were obtained of the Place des Victoires, two of the Rue Pagevin, two of the Rue de la Justice, and one of the Rue d'Argout, while the celebrated Rue Tiquetonne will be taken from several points within a few days. The same measure is henceforth to be applied to all old buildings condemned by the City for improvements, and the collection of views thus obtained cannot fail to be of the greatest interest and aid to Paris archaeologists and historians.

The Prefect of the Seine, in accordance with a resolution of the Committee of Public Inscriptions, has given orders that a tablet shall be placed over the entrance to the Paris Chamber of Notaries, bearing an inscription which may be translated:—"On this spot stood the Grand Châtelet, the former fortified gate of the City, seat of the Paris Provost and of the Corporation of Notaries."

The frequency of inundations on the Seine during the winter months has impelled the riverside population of Charenton, Sory, Maisons Alfort, Alfortville, &c., to form a committee charged to



study the best means of preventing their recurrence. A local engineer, M. Gohierre, has submitted a plan for the cutting of a canal from the Marne to the Seine, between Champigny and Epinay, as a means of carrying off the surplus water in the latter river.

The last few sittings of the Municipal Council, prior to the date fixed for the general election by which it is to be renewed, will be entirely devoted to the examination of various schemes of City works, among which, both on account of its importance and of the probability of its being adopted, may be particularly mentioned the projected series of local improvements, comprising an extension of the Halles Centrales, the establishment of a produce exchange adjoining the Corn Market, and the prolongation of the Rue du Louvre between the Rue St.-Honoré and the Rue Coquillière, the whole of which would necessitate an outlay of 25,000,000 frs. Towards this sum, however, the Paris Chamber of Commerce are prepared to find no less than 16,000,000 frs.

Gustave Doré's statue of Alexandre Dumas the Elder, which was unveiled last November on the open space of the Place Malesherbes, at the junction of the Boulevards Malesherbes and Courcelles with the Avenue de Villiers, has been formally presented to the City of Paris by the committee that raised the subscriptions for its erection.

One of the wings of the well-known Château de Fervacques, in the department of Calvados, suddenly gave way and fell with a crash during the night of Saturday last. The mansion was built in 1552 by Guillaume de Hautemer, Marquis de Fervacques, and belongs at present to the Comte de Montgomery.

The visits to the Paris sewers were begun anew on the 16th inst. Entrance can be obtained only by special permits from the Prefect of the Seine. Four trips a day are made from the Châtelet to the Madeleine, and *vice-versa*, 88 persons only being admitted at a time, thus making a maximum of 352 visitors a day. The average number of applications for tickets every year is 35,000, out of which only 4,500 can be granted.

One of the historic monuments of Paris, the Porte St.-Denis, is at the present moment in a very bad state of repair, portions of the fine bassi-relievi and other ornamental work being literally crumbling away. It seems almost incredible, but it is nevertheless true, that the fact of the edifice being crowned with the statue of the Grand Monarque is likely to stand as an obstacle to its immediate repair. The Municipal Council objects to the outlay of money on anything monarchical, even though it be the monument of a glorious period of national history. The St.-Denis arch was erected in 1672 by the City of Paris from the designs of Blondel, and in commemoration of the conquests of Louis XIV. The only inscription is the words "Ludovico Magno" on the principal façade. It is to be hoped that a compromise may be arrived at with the Council, whereby the king's statue might be relegated to some museum as a sacrifice to the fervid Republican zeal of that body, which would then give orders for the restoration of the remainder of the monument.

Experiments with a new kind of fire-escape, the invention of a M. Robert, were carried out on Sunday last on the Place Baudeyer. The apparatus in question consists of a metal ball, which can easily be hooked on to a window. This ball contains a belt to be adjusted round the body and fastened to a long rope; the end of a second rope is held firmly in the hands, after which the person can jump from the window. By the means of a kind of brake arrangement, the body can be lowered into the street at more or less speed, or the descent can be checked altogether. In the trial made on Sunday seventy-six persons descended from a fourth floor by means of the apparatus. At one moment a panic was simulated, when fourteen persons, including men, women, and children, lowered themselves in twelve minutes—one man stopping in his descent at a second-floor window, whence he rescued a woman and child.

A New Workhouse is to be erected for the Tynemouth Union, North Shields, but the competition for designs has been postponed until after the election of the new Board of Guardians.

## CASTLE VIANDEN, LUXEMBURG.

"THE twelfth and thirteenth centuries—period of the finest blossoms of the Romaic, and buds of Gothic architecture—fashioned this Colossus, and adorned its parts with the pure charm peculiar to themselves, so that one is undecided whether most to admire the imposing grandeur of the whole design, or the inherent living elegance of the ornaments, that unfold themselves, full of meaning, as they lie strewn around." Thus wrote the German archæologist Reichensperger, of the impression made upon him by the ruined castle of Vianden, within eight miles of Diekirch. And, indeed, this picturesque and historical work has greater attractions for the artist and the archæologist than any other of the many points of interest in the Grand Duchy of Luxemburg.

Surrounded by lofty and solid walls, flanked by twenty-four towers, mostly semicircular, and with six gates guarded by portcullis, the town of Vianden was an important stronghold in the Middle Ages—indeed, next to Luxemburg itself, the most important in the Grand Duchy. In its midst, on a rocky escarpment 850 mètres above the river Our, rose the ancient castle of the powerful Counts of Vianden. From whatever side the visitor beholds the ruins of this imposing fortress, they present a grand aspect, being set, like a gem, in a site on which Nature seems to have lavished all her picturesque effects. From the terraces a charming view is afforded over the valley of the Our. The principal street is arranged round the castle, with which communication was formerly gained by a subterraneous passage. Closely examined, these ruins present many peculiarities of the highest interest to the architect, the historian, and the military engineer. Everything recalls the great feudal power of its seigniors, who for ages were only dependent "on God and the sun," to use a favourite expression of these sovereign lords who had vassal nobles in their train.

Additional lustre attaches to the noble House of Vianden through its fusion, in the fourteenth century, with the House of Orange-Nassau, now reigning in Holland. In 1351 the heritage descended to Adelaide, one of the sisters of the last Count, who had married Count Otho of Nassau. Their son, John I., sat in the Assembly of the States-General, 1444, at which Philip of Burgundy was proclaimed Duke of Luxemburg. Engelbert, great great grandson of John, was Governor of Luxemburg in 1483, but, dying without issue, he was succeeded in 1489 by his brother, John III. William I., son of the last-named, was the father of William the Taciturn and of John IV., from whom is descended the present King of Holland, who is also Grand Duke of Luxemburg and Count of Vianden.

The castle is now the property of the heirs of Prince Henry of the Low Countries, who was, with his wife, the Princess Amelia Maria da Gloria of Saxe-Weimar, greatly beloved in Luxemburg, where he was the Grand Duke's representative. The chapel of the castle has been partially restored; and the restoration has given rise to a lively discussion between the architect and Victor Hugo, who is a great admirer of these ruins.

For twenty-five years the castle of Vianden has been the subject of patient and minute study by M. Charles Arendt, the State Architect, who is about to publish, by subscription, a magnificent work, illustrated with nineteen plates, the dedication of which has been accepted by King William III. of Holland. Its scope is set forth in the report of the Historical Section of the Grand Ducal Institute as follows:—The work consists of three parts, of which the first comprises an architectural description, the second an historical notice, and the third an album of plans and views of Vianden. In the second part the author briefly sketches the history of the Counts and of the castle from the earliest times until the present, all the details being derived from the most trustworthy sources. The first and the third parts are quite new. This is the first time that the castle of Vianden, the construction of which presents so many points of interest, is thus examined by an expert. We are of opinion that the author has attained his object. Not only does he describe all the parts of the ancient castle, and its works of defence, but he also makes us participate in the construction of the sumptuous edifice by pointing out from what century date the chapel, the towers, &c. We are persuaded that this portion will secure the approval of all connoisseurs. But it is the album which especially captivates the attention. We are shown in turn the principal views, the marvellous sites in which this ancient Vienna\* abounds, the architectural beauties, the plans of the castle, and the most remarkable monuments of the old courts, all the views being faithful and admirably executed. This is signed by the president, M. Wurth-Paquet, and the secretary, M. Van Werweke; and Victor Hugo has also shown high appreciation of the work.

\* It is thus that Vianden is named in the old charters. M. Arendt has added to his work a supplementary plate giving facsimiles of two old charters—one of Yolande, 1271, with seals of the prioress and of the convent of Marienthal, *Vallis Sancta Maria*, and the other of Philip, 1262, with seals of the Count and Mary his wife.



## THE NEW YORK CITY HALL.\*

AT this time, when architecture is being revived in America as an art rather than practised as a trade, attention is being drawn to the excellence of some of our public buildings erected in the last century or about the beginning of this; when, fortunately, the purity of style in architecture maintained in England, especially by Sir William Chambers and certain of his pupils and others, was gaining a footing in this country, and was taking shape in the New York City Hall and some other buildings of the time. If what is said here helps to fix attention upon these old buildings, and to stimulate efforts for their preservation, the object of the writer will have been attained.

When the City Hall was first occupied, in 1811, it had for its nearest neighbours the bridewell close by on the west, the almshouse behind it, and the gaol, which was made over into the present Hall of Records. From the portico of the City Hall there was an unbroken view down Broadway, including St. Paul's, the little odd shops that occupied the site of the *Herald* building, the wooden spire of Trinity, and the cupola of Grace Church. Now the post-office shows its ugly back to its classic neighbour, and, on the northern side, the new court-house has been built on the site of the almshouse.

To tell the story of the building of the City Hall in all its details would be impossible here. From corner-stone to parapet it was more than ten years under way. Many a modern settlement has grown to cityhood in less time. The labours and dangers, constructive and financial, connected with it, rivalled those of carrying the gods to Latium. May 26, 1803, the corner-stone was laid in the south-east corner by Edward Livingston, then mayor of the city.

The preceding three years had been spent by the Corporation in the endeavour to settle upon a plan that would be acceptable to all. On March 24, 1800, they had appointed a committee to consider the expediency of erecting a new hall, and to report their opinion as to the proper place, with a plan of the building, an estimate of the expense, and suggestions for the disposal of the old City Hall. In accordance with this resolution, the committee offered a premium of 350 dols. for a plan and elevations of the four façades. From among the plans so obtained one was selected and adopted by the aldermen, October 4, 1802. On the 11th of the same month the Common Council appropriated 25,000 dols. toward carrying it out, and appointed a building committee. Opposition to the undertaking now developed itself through a dilatory resolution offered to the Common Council, December 27. It was ingenuously worded and called for much detailed information. The hope of its promoter was to create dissatisfaction with the adopted plan as being too ornate, too expensive, and larger than the city required. Under the pressure thus brought to bear, the committee, although fully intent upon the use of marble, on February 21, 1803, reported estimates of the cost of using marble and of using stone for the front of the building.

They advised the Common Council that the plan might be somewhat curtailed, especially in the projecting wings, but were unanimously of the opinion that it was advisable that the hall should be built in accordance with the adopted plans, with the exception mentioned; that the front should be of Stockbridge marble, the sides of Morrisania or Verplanck marble, and the rear of brown stone.

This report was rejected, and at the meeting of the Common Council a week later it was ordered that the committee should be discharged and a new one named, to consist of a member from each ward of the city. Aldermen Oothout, Van Zandt, Brasher, Barker, Minthorne, Le Roy, and Bogardus were accordingly appointed. All persons employed by the late committee were discharged, and the moneys remaining in their hands were paid over to the city treasurer. The new committee immediately re-appointed Mr. McComb architect, and fixed his pay at six dols. a day for each and every day he should be engaged upon the building.

I have had access to Mr. McComb's papers, which still remain in his family, and which include the original designs, a great part of the working drawings, the diary that he kept pertaining to the building, his accounts of marble, correspondence, &c. Many of the books of his library also remain, and through them one may trace the sources from which he had collected much of the information that enabled him to execute a work which, so long as it stands, will continue to be admired for the purity of the design and the elegance of its execution. It was probably in anticipation of the change which was to take place in the committee that the architect had been instructed on March 10 to make out a plan on a reduced scale, by taking away three windows from the extreme depth of the building, two of them to come away from the depth of the end projections of the main front; and by shortening the length of the building by taking out two windows, and to make estimates accordingly. The reduced plan and estimates were at once furnished, with the information that, should brown stone be used, the cost, exclusive of statuary and bas-relief, would not exceed

200,000 dols. On the 18th of the same month the new Building Committee met at the almshouse, and determined "that the reduced plan for building the new City Hall presented by Mr. John McComb should be adopted; that the front, rear, and ends be built of brown freestone; that the said building be erected on the vacant ground between the gaol and bridewell; that the wings, in front, range with Murray Street, on a parallel line with the fence in front of the almshouse."

On the 21st the committee reported their action to the Common Council, and the plan and estimates above referred to, with the assurance that they had "endeavoured to combine durability, convenience, and elegance with as much economy as the importance of the object will possibly admit of." This report was at once confirmed, and 25,000 dols. placed at the disposal of the committee, with instructions to proceed with the construction of the hall with all expedition. During this time Mr. McComb had been indefatigable in his efforts to induce the committee to return to the original plan with the use of marble as the building material; and on April 4 they so far relented as to express to the Common Council their doubts as to the propriety of diminishing the length by leaving out two windows of the front. Fortunately, the Common Council seems to have been similarly impressed, and ordered the original dimensions of the front to be restored. Discussion as to the dimensions of the plan then ceased, for under date of the following day Mr. McComb's diary contains this entry:—

"April 5.—I marked out the ground for the building, and the cart-men began to dig for the foundation. Previous to this the Corporation resolved to have the length of the building agreeable to the original design of 215 feet and 9 inches, but insisted on its being reduced in depth as they had directed in March. Reducing the projections in front, I readily agreed to; but cutting off the depth of the building, I contended, was a very bad plan, as it spoils the proportion of the large court-rooms and cramps the whole of the work, but no arguments could prevail. Several wished to cut off the projection in the rear, and two of the committee insisted that the north front had better be built of blue stone."

Steps were taken to procure the brown stone determined on as the material to be used from New Jersey. A quarry at Newark was leased, and arrangements were made to procure more from Second River. Notwithstanding the unhealthfulness of the city, the construction does not seem to have been retarded, for in the fall of the same year the foundation had been carried to the top of the basement window arches, at a cost of some 46,000 dols. Meanwhile the views of the committee seem to have been again enlarged, for on September 3 Mr. McComb records that he found some of the members of the Common Council in favour of white stone for the principal fronts, and that he was then requested to estimate the additional cost of the use of marble for the three fronts. The estimate was furnished and reported to the Common Council. The report was made in October, and included the following argument in favour of a more liberal expenditure:—

"It appears from this (the architect's) estimate that the difference of expense between marble and brown stone will not exceed the sum of 43,750 dols., including every contingent charge. When it is considered that the city of New York, from its inviting situation and increasing opulence, stands unrivalled; when we reflect that as a commercial city we claim a superior standing, our imports and exports exceeding any other in the United States, we certainly ought, in this pleasing state of things, to possess at least one public edifice which shall vie with the many now erected in Philadelphia and elsewhere. It should be remembered that this building is intended to endure for ages; that it is to be narrowly inspected, not only by the scrutinising eyes of our own citizens, but of every scientific stranger, and in an architectural point of view it, in fact, is to give a character to our city. The additional expense of marble will be fully counterbalanced when we recollect that, from the elegance and situation of this building, the public property on the Broadway and Collect will much increase in value, and that the same influence will be extended to property far beyond these limits, and that in the course of a very few years it is destined to be in the centre of the wealth and population of this city. A building so constructed will do honour to its founders, and be commensurate with our flourishing situation. Under these impressions the Building Committee strongly recommend that the front and two end views of the new Hall be built with marble."

The report is in Mr. McComb's handwriting, but is signed by Wynant Van Zandt, jun.

In accordance with this report, the Corporation authorised the use of marble in the "three fronts," and on November 14 concluded a contract for marble from West Stockbridge, Mass. The price was 1 dol. 6 cents per cubic foot, delivered in New York. Under this contract 33,274 feet and 10 inches of marble were delivered. In 1808 the same contractors furnished 2,000 feet more, at 3 dols. a foot. The aggregate of these two bills gives us the

\* From an article by Mr. E. S. Wilde in the *Century*.



amount used in the edifice. Nearly all the building material was furnished by contract. The labour was by day's work. By December 1, 1807, the amount expended had reached 207,000 dols., and the walls were built up to the under side of the second storey window-sills. The expenditures were always in excess of the appropriations, and the slowness with which the work was carried on is attributable probably to the reluctance of the Corporation to increase the burdens of taxation. The stirring political contests of the day induced both parties to act with great caution. At the same time, apart from the question of expediency, the ability of the city to raise money for extraordinary purposes was circumscribed.

In 1808 the wages of the stone-cutters was reduced from 1 dol. 25 cents to 1 dol. a day, and many were given employment who would otherwise have become a charge upon the city. The building was then retarded on account of hard times, for the appropriation was small. In the spring of 1810 it was impossible to obtain workmen enough, and delay was caused by the return of prosperity. In the fall of this year, however, the interior walls had been carried up to their full height, and the interior roof of the wings in part slated. The copper for the upper roof, which was imported at a cost of 2,425*l.* 13*s.* 9*d.* sterling, was daily expected. It did not arrive, however, in time to be used before the following spring. Considerable progress had been made towards finishing rooms for the accommodation of the common council, mayor, clerk, and comptroller; and in 1811 the "city fathers" celebrated the Fourth of July in the new Hall.

It appears that some slight changes were made during construction. In rebuilding the cupola and the dome over the stairs, but little effort was made to restore more than the general appearance of the originals, which accounts for the present deformity of both. Notwithstanding this change, and the damage done less by time than by stupidity, the Hall stands to-day unsurpassed by any structure of the kind in the country. The design is pure. No pains or research was spared. The capitals of the first and second orders are marvels of execution. When some fault seems to have been found during the progress of the work by a competitor of the sculptor, in a communication upon that subject to the Building Committee, Mr. McComb remarked:—"I have visited the carvers' shop almost daily, and have been always pleased with Mr. Lemair's attention, mode of working, and finishing the capitals—work which is not surpassed by any in the United States, and but seldom seen better executed in Europe, and which for proportion and neatness of workmanship will serve as models for carvers in future." The name of Mr. John Lemair, to whom this compliment was so deservedly paid, will be found cut in the top of the blocking course over the front attic storey, together with the names of the Building Committee, architect, and master mechanics. The Ionic columns and pilasters, with their capitals, are remarkably like those in the portico of St. Paul's Church, New York. The latter, however, are fluted and cabled, and in turn resemble those by Ripley in the Admiralty Office, London. The second order is designed after Sir William Chambers, whose work on civil architecture had made its appearance a few years prior to the beginning of the century. The entablature of this order, however, after the Greek, is composed without the dentil, which gives prominence to the modillion and lightens up the cornice, the dentil being introduced in the Ionic order of the first storey, where the soffit of the corona is worked into a plain drip with strong effect. The Classic detail throughout is admirably wrought. There is a touch of the Adam Brothers in the leaves of the capitals to the pilasters of the attic-storey front that is not unpleasing. This part of the building has, in fact, never been finished. The undefined want was supplied in the design by a pedimental foil to the base of the cupola, composed of statuary representing the city arms, which was simply intended to convey the architect's idea. This was to have covered the middle block, while the blocks at either end were to have held respectively the arms of the United States and those of the State of New York. In 1817 Mr. McComb, then Street Commissioner, endeavoured to have this carried out, and stated, in a communication to the Common Council, that it had not been done before for the want of a sufficiently skilled resident artist; that a highly-recommended sculptor having recently settled here, the difficulty no longer existed. He therefore recommended the subject to the consideration of the Board. The Committee on Arts reported adversely, the estimated cost being 8,556 dols. The outlay was considered too great. It was the same committee that in 1830 expended about 6,500 dols. in providing a bell and placing a clock in the cupola. The clock was destroyed in the fire of 1858, and the bell has been removed. In removing the bell the cornice of the rear was damaged, and the decorative parts that were set aside have never been replaced, but still lie upon the roof. The scales have fallen from the hand of the statue of *Justice*, and the birds have built a nest in a break in her side. Heaven benignly wards the lightning from the broken rod on the cupola, but seems powerless to prevent the heavy telegraph cables from tugging at the chimneys. One of these wires stretches, otherwise unsupported, to the roof of the Tract House. Holes for rain-water leaders have been hacked through the cornice, and on the west side the iron rust from a neglected chimney-top has discoloured the marble well down the building.

## ENGLISH FACTORIES.

THE report of Mr. Alexander Redgrave, the Chief Inspector of Factories, for 1883, has appeared, and as half a century has elapsed since the passing of the first effective Factory Act, the year 1883 may be distinguished as the "jubilee" of factory legislation. During the past year there have been 8,996 accidents, of which 401 were fatal. Among the causes of the fatalities, hoists and circular saws are enumerated. As regards hoists, the report says it is hardly necessary to urge the propriety of self-acting doors—*i.e.* of doors which close of themselves and remain closed, unless set open on purpose. There is also another kind of guard of special value, where the space in front of the "well" is confined. This is a contrivance of light iron bars which fold up into the lift-framing when not in use, and expand by means of a pulley into a sufficient gate, somewhat on the principle of a lady's fan. The importance of ascertaining what weight each hoist is built for, what maximum weight is actually taken on, and of testing the friction gear and head gear to see if locking be complete, should be understood. Should even these precautions fail, the use of the self-acting wedge apparatus renders an accident almost impossible. High authorities speak to the truth of the inventor's assertion that if a breakage of the lift-chain occur, the wedges immediately receive the cage, stopping it instantly in a gentle and easy manner, and holding it in perfect safety.

The report says that the barrier or railing which is erected in order to protect people against accidents through coming in contact with gearing is often too low. In other cases the guard is placed too near the wheel. It is suggested that the danger arising from circular saws might be obviated by protecting the workman's hand with a gauntlet. If the use of respirators has to be tolerated in some occupations, why not that of gauntlets? Large circular saws which are placed on the ground-level are generally left without any protection, and in consequence many accidents happen. Whoever, it is said, would invent a really effective protection for circular saws, and could afford to sell it at a price within the means of the smaller firms, would be a benefactor to the working class. In London, the masters generally believe that with care no danger need be apprehended, and therefore they allow workers to take their chance.

According to the report the improvement in the sanitary condition of factories and workshops has required much consideration and discretion. Until the year 1867 the only regulation in force providing in some degree for the maintenance of a healthy condition of factories was that requiring every part of a factory to be limewashed once in every fourteen months. In 1867 a further regulation was made that every factory and workshop should be efficiently ventilated, so as to render harmless, so far as is practicable, any gases, dust, or other impurities generated in the process of manufacture, and should not be overcrowded so as to be prejudicial to the health of the persons employed. The administration of these provisions in respect to large factories presented no difficulties, but it was otherwise in factories where hand labour only was employed, and in workshops in which handicrafts alone are carried on. A representation of the want of ventilation of workrooms has been generally met with the proposition to keep a window or a door open, as if by doing so ventilation was secured. Many London factories were formerly dwelling-houses, and are without any provision for the ventilation that would be adequate for a large number of work-people. The artificial flower trade, tailoring, frilling, umbrellas, ties, fur, ostrich feather, envelope-making and gumming may be said to be carried on in converted dwelling-houses, and in which the atmosphere is tainted for want of change, and from a disinclination of London workers even to allow a ventilator in a pane of glass to admit circulation of air for fear of cold air coming direct upon them. Nor is London alone in the possession of unhealthy workshops. They are found in all manufacturing towns. Mr. Bowling, in his report on Birmingham, says:—"Though great improvements have taken place in the last ten years, there still remain too many places which should be improved off the face of the earth. So much has been done in Birmingham by a combination of philanthropic and commercial enterprise to provide for the working-classes scientific and literary institutes, public libraries, hospitals, provident dispensaries, coffee-palaces, parks, and recreation-grounds, that I sometimes wonder that the idea has not entered the heads of some of the public-minded and large-hearted citizens of this great town to form a company for the erection of model workshops, to be let out to the thousands of small masters who are found now to carry on their handicrafts under very wretched and insanitary conditions. I feel sure that such an enterprise could be made a commercial success, and would result in a vast benefit to the community. Some of the so-called 'mills' in Birmingham, which perhaps hold from twenty to forty tenants, are hopelessly miserable places, and must exercise a very depressing and demoralising influence on the poor people who have to work in them. I think that could such mills be replaced by lofty, well-arranged, cleanly, properly ventilated structures, in which order and decency were enforced, the present tumble-down mills and workshops would soon be emptied, to the great advantage of the town."



## NOTES AND COMMENTS.

WE lately pointed out the omission of an architect's name from the list of the representatives of science and art who were to receive honorary degrees in Edinburgh. We are glad to see that the University has seen the injustice of the omission, and Mr. R. ROWAND ANDERSON is among the artists who have been honoured at the Tercentenary celebration. When it is remembered that the new building for the University has been designed by him, it is only justice that he should obtain all the favour that the authorities can bestow. The original design has not yet been carried out in its entirety, for the campanile, which is one of the essential parts, has not been commenced; but the work which is executed is of such a character as to justify an Edinburgh paper in describing the building as being "the most important edifice erected in this country since public taste, getting wearied of everlasting Gothic, began once more to show a predilection for Classic forms; and whether considered with reference to its style or its adaptation to the purposes of a great medical school, the work reflects the highest credit on its designer."

THE society in Rome which represents the interest taken by Englishmen in classic archaeology has not been fortunate of late years. But we are glad to hear that the last session has been successful, as good papers have been read by Mr. NICHOLS, Mr. PULLAN, and others, while the visits have been carefully organised. France and Germany have Government institutions in Rome, and there are other countries which expend money in promoting research there. All work of that kind must in this country be carried out without aid from the Exchequer; but, considering the number of Englishmen who visit the Eternal City, there ought to be no difficulty in upholding the society. The death of Mr. PARKER is a loss to the cause, for he kept Roman archaeology before the eyes of the public, and the committee have, in consequence, the greater claims upon their countrymen for help at the present time.

IT is proposed to carry out some works at Wells Cathedral as a memorial of Bishop KEN, who was appointed to the see of Bath and Wells in 1684, and was deprived of his office for refusing to take the oaths to WILLIAM and MARY in 1691. The following are considered appropriate works:—First—A memorial window in the north aisle, representing the three following subjects:—(1) *Eli and Samuel*; (2) *St. Paul and Timothy*; (3) *David playing before Saul*. It is believed that these are eminently appropriate to the character of Bishop KEN as a sacred poet, consecrating his gifts as such to the work of Christian education. Second—Fitting up the Lady chapel with stalls and seats for special services and lectures such as have been given during the present year. Third—A new reredos to take the place of the stone screen, somewhat cold and bare in its effect, which at present divides the choir from the Lady chapel.

A PAPER will be read by Mr. J. B. REDMAN on "Thames Communications" at the meeting of the Society of Arts on Wednesday next. In the Applied Chemistry and Physics Section the adjourned discussion on Dr. PERCY FRANKLAND's paper, "The Upper Thames as a Source of Water Supply," will be resumed on Monday. Mr. PURDON CLARKE is to read a paper on "Street Architecture in India" on May 30. It will be illustrated by means of the oxyhydrogen light.

A CURIOUS action has been tried in which the parties are the clergymen who represent what was the old parish of Manchester, and the dean and canons. It was claimed that certain surplus funds should be divided amongst the clergymen instead of among the chapter. One of the questions involved was the conservation of the cathedral. Accounts were submitted showing the following expenditure on the building:—In 1873 the sum of 149*l.* was spent; in 1874, 178*l.*; in 1875, 73*l.*; in 1876, 166*l.*; in 1877, 200*l.*; in 1878, 337*l.*; in 1879, 380*l.*; total, 1,403*l.* The dean and canons admitted that the only parts of the cathedral which they were liable to repair were the chancel, with its side aisles, and the chapter-house. The affidavit made by the gentleman who since 1874 had held the office of bursar, and who now holds the office, stated that the side aisles did not include any of the

chapels. The only repairs for which the assent of the bishop was obtained since 1871 dealt with the eastern walls of the choir where it adjoined the Chetham chapel, and it was alleged that it was only for extraordinary repair that the approbation of the bishop was necessary. In 1873 the Chetham chapel was out of repair, and a considerable sum was raised by public subscription; it had no connection with the choir except that it was entered from it. This expenditure was not within the strict powers of the dean and chapter, because, though authorised by the bishop, it was no part of the cathedral which the dean and canons were bound to repair. But Mr. Justice NORTH, who tried the case, came to the conclusion that, with the exception of damages by wind, storm, or fire, the approval of the bishop was indispensable. The collegiate church, which is now the cathedral, was founded in 1421.

MR. ALFRED MARKS has had some copies printed of his essay on the relation between the *St. Anne* by LEONARDO DA VINCI, which is in the Louvre, and the cartoon belonging to the Royal Academy. It is difficult to trace the history of any work of DA VINCI'S, for the great artist was indifferent to fame, and appears to have given himself no trouble about the perplexities which have arisen from the skill of imitators and copyists. According to Mr. MARKS'S pamphlet, there are about twenty designs and pictures which have a *motif* similar to the work in the Louvre, and it is impossible to say how far they can be identified. The Academy cartoon is a noble example, yet it was neglected by its owners, and appears to have been unknown to SHEE before he was president. The history of the cartoon can no longer be ascertained, but there are grounds for supposing that it is the veritable work which, according to VASARI, astonished all Florence.

AN excellent stained glass window, which has been produced for one of Mr. SEDDON'S churches in Wales, has been on view at Messrs. BALHAM'S. The subject treated is *The Transfiguration*. Much skill has been shown in the arrangement. There are none of the sombre colours employed which are often supposed to confer richness on a window; and the principal figures are marked by the brightness of their garments. Ruby is sparingly used to express the nimbi of the apostles. The figures are vigorously drawn, and without any suggestion of the stiffness that at one time was supposed to be indispensable in stained glass for a Gothic church.

THE Carpenters' and Joiners' Companies have secured for their forthcoming exhibition at Carpenters' Hall the loan from the Royal Architectural Museum of Mr. BURGESS'S well-known drawing of *The Flèche at Amiens*, and also from Mr. A. STREET a drawing of the *flèche* over the Law Courts. The Royal Institute of British Architects have promised to contribute some drawings of carpentry in their library, and drawings of old work have been promised by several architects.

THE following extract, descriptive of the Ambleside of the future, from a letter by Mr. RUSKIN, on the projected railway, will show that he has lost none of his skill in the use of sarcasm:—"It is easy to conceive (I have seen far more wonderful changes) a high street of magnificent establishments in millinery and *nouveautés* running along under the hills from Ambleside to Grasmere, with the railway to Keswick immediately in their rear. I can imagine the sublimity of Wordsworth Crescent and Silverhow Circus commanding the esplanade which will encompass the waters of Rydal and Grasmere, principally, then, of necessity, composed of sewage, while the 'rivulets in May,' which once leaped with LOUISA in the shade, will be usefully disposed in successive tanks of which the scum will be inflammable. A 'lift' to the top of Helvellyn, and a refreshment-room on the summit, will prepare the enthusiastic traveller for a 'drop' to Ulleswater; while beyond the rectilinear shores of Thirlmere Reservoir the Vale of St. John will be laid out in a succession of tennis-grounds, and the billiard-rooms of the Bridal of Triermain Casino be decorated in the ultimate exquisiteness of Parisian taste. Such development of our resources in the Lake District is, I suppose, inevitable. I do not, therefore, question how far desirable. In Derbyshire, on the contrary, there may, perhaps, be yet somewhat alleged in defence of things as they are."









HOUSES, COLWYN, NORTH WALES

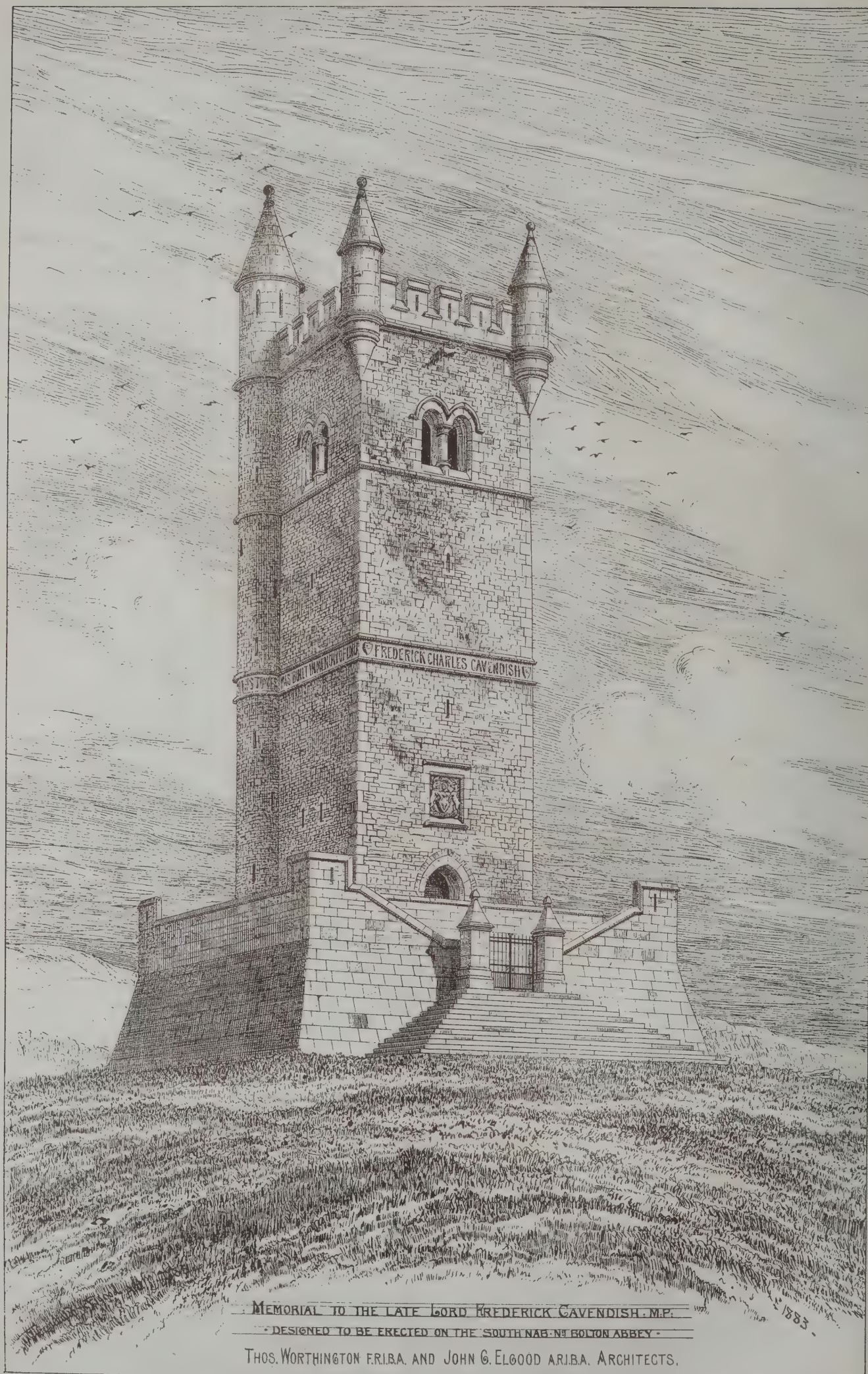
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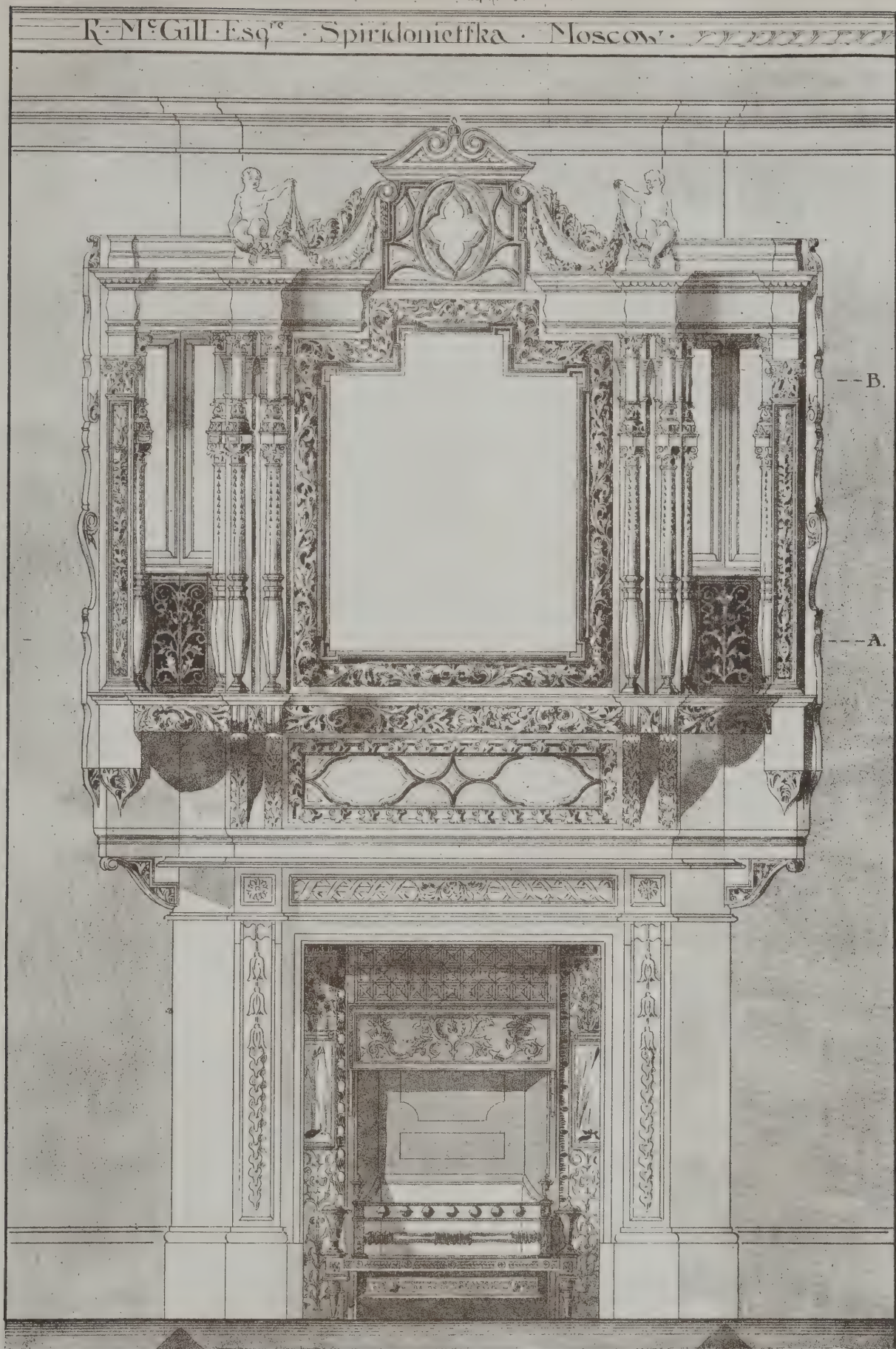








R. McGill Esq<sup>re</sup> · Spiridonieffka · Moscow ·



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ELEVATION

Plan  
at A looking  
down

PLAN

Plan  
at B looking  
up

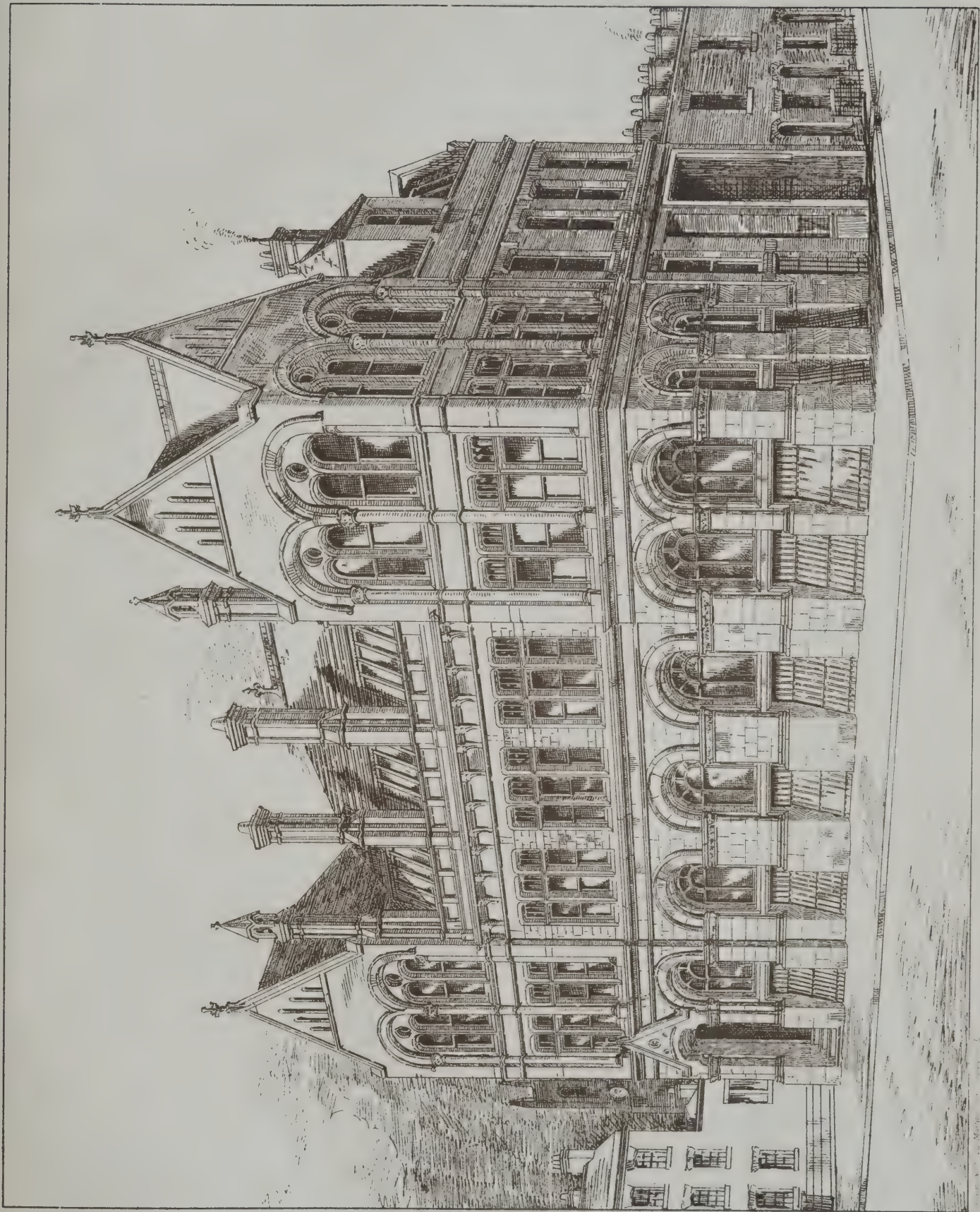
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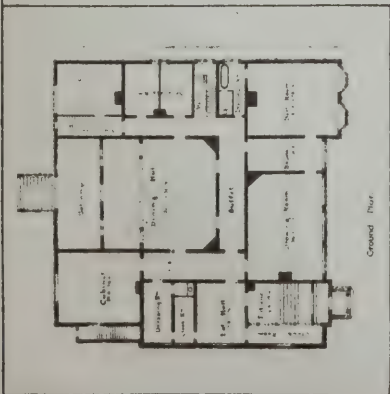
WAREHOUSE, BYROM STREET, MANCHESTER.

FOR MESS<sup>RS</sup> EDWARDS, CUNLIFFE, WILSON & CO  
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A HOUSE NEAR MOSCOW.

R. KNILL FREEMAN, FRIBA ARCHT







## ILLUSTRATIONS.

MEMORIAL TOWER TO THE LATE LORD FREDERICK  
CAVENDISH, M.P., &c.

THE constituents of the division of the North-West Riding of Yorkshire, which Lord FREDERICK CAVENDISH represented in Parliament, having determined to erect a monument to his memory, and selected the South Nab, an eminence overlooking Bolton Abbey, as a suitable site, invited designs from three architects—Messrs. CURREY, CARPENTER, and WORTHINGTON.

The design of the last-named gentleman, which we illustrate to-day, was selected, and working drawings have since been prepared for carrying it into execution. It consists of a tower 25 feet square and 80 feet in height, with circular turret stairs, placed upon a platform about 50 feet square, and raised 20 feet from the ground, and it was intended to be built of the stone quarried in the neighbourhood, the Duke of DEVONSHIRE having kindly given every facility for obtaining such materials as the locality afforded.

From a report published in our number of March 8, our readers are aware that in consequence of a memorial to the Duke of DEVONSHIRE from certain artists and others, the question of the site is at present in abeyance, and we understand that the Committee have it now under consideration whether to carry out the memorial in Bradford or the neighbourhood.

WAREHOUSE, PRINCESS STREET, MANCHESTER.  
WAREHOUSE, BYROM STREET, MANCHESTER.

THE buildings shown in the illustrations are among the recent works of Messrs. CLEGG, SON & KNOWLES, King Street, Manchester. An insurance office by the same firm was lately published in *The Architect*.

HOUSES, COLWYN, NORTH WALES.

THE London and North-Western Company having determined upon the erection of a station on their line at Colwyn, North Wales, a few gentlemen recently purchased a small estate immediately adjoining that station, with the intention of forming thereof a seaside resort that would be free from the usual type and workmanship of the speculative builder's lodging-house, and in which the sewerage, drainage, &c., would be carried out with every sanitary precaution. The station was opened about a fortnight since for passenger traffic. The sewerage and road-making are being carried out by Mr. BUGBIRD, contractor, Carnarvon. The block of houses which we this week illustrate was commenced last month, the contractors being Messrs. WILSON, TOFT & HUNTLY, Manchester. The houses are built externally of stone lined with brick, the upper portions being partly in stucco and partly covered with brindled tiles. The estate rises easily from the sea, and commands views of mountain (including the Little Orme's Head) and sea. The rising of the ground is a great aid to picturesque building. A fine background exists in the Llandulas Rock, which also serves the useful purpose of entirely sheltering the estate from the east, and rendering it well calculated for a winter as well as a summer resort. The architect is Mr. CHARLES HEATHCOTE, F.R.I.B.A., 6 Princess Street, Manchester, and at Colwyn Bay.

HOUSE AT MOSCOW.

THE house proposed to be erected at Moscow is from the design of Mr. R. K. FREEMAN, F.R.I.B.A. The plan of this house is arranged on the Russian system, the principal parts being one storey only in height, with kitchen, servants' rooms, &c., in the basement.

CHIMNEYPIECE AT MOSCOW.

THE angles, chimneypiece, grate, and over-mantel are for the dining-room at Speridona, the residence of Mr. R. MCGILL, Moscow. The over-mantel will be of ebonised wood, and the centre panel filled with a painting, other panels having bevelled mirrors. The design is also by Mr. FREEMAN.

HIBERNIAN BANK, DUBLIN.\*

THE Hibernian Bank occupies a striking position in College Green, Dublin, facing the Bank of Ireland, formerly the Parliament House. As a design it may be said to have grown by the exigencies and opportunities afforded by

the disappearance of adjoining buildings rather than by original fixed purpose. It was originally begun in 1863 as the Union Bank of Ireland, Mr. WM. G. MURRAY, R.H.A., since deceased, being the architect, with whose office Mr. T. DREW, R.H.A., who has since completed it, was then connected. It was originally intended to be but three bays in width, and flanked on either side by other buildings. During its erection additional room was acquired on the east side, allowing very nearly, but not quite, frontage for two bays more. The angle treatment and entrance on the splay were devised by Mr. DREW, to fall in with the dimensions of the additional site. Some ten years later additional premises were acquired on the west side of triangular and irregular shape. The building was then extended by some four bays, and finished with a semi-circular end towards the west, adapted to the oblique angle of the boundary. The last extension, inclusive of office fittings, &c., amounted to a cost of 29,000*l.*, and the whole cost about 45,000*l.*

The building is somewhat peculiar in detail, arising out of the striving spirit of some twenty years ago to reconcile Gothic originality and vigour of handling with the general form and composition of Renaissance buildings. There is throughout in this building an avoidance of any cornice, moulding, column, or pilaster which might be identified as drawn from any Classic source. How far a bold essay of this kind may be successful, in spite of its hazardous character, our illustration, from a faithful drawing by Mr. HERBERT A. GRIBBLE, gives an excellent view. Whether the designer, in the maturity of middle age, and further removed from the energetic force of the Gothic revival, would compose in such muscular form or in detail of more time-honoured and accepted character, or whether under the latter conditions he would produce a building as bold in light and shade, and as picturesque, in a street of striking architectural character, are points for debate of posterity. As the building was begun in 1863, it had to be finished in 1874-76. It has not been illustrated until now.

The stone of which it is built is Drogheda limestone, first used on any extensive scale in it, and proved in it to be an excellent and workable building stone, the use of which has now become very widely spread.

The builder of the first portion was Mr. GEORGE MOYERS, and of the latter Messrs. COLLEN BROS., of Portadown and Belfast.

## THE EARLY RENAISSANCE ARCHITECTURE OF ITALY.\*

By R. ROWAND ANDERSON.

WHAT I have to say this evening is in continuation of a paper I had the honour of reading to you last session on the early Italian Renaissance.

In that paper I endeavoured to explain the origin, or rather the development, of Renaissance art, and why that movement took place in Italy rather than in any of the other countries of Europe. I showed you that in Italy the traditions and forms of Roman art had never completely died out, and that the state of architecture in that country readily yielded to, and was influenced by the great intellectual movement which had been at work for a long time previous to its affecting architecture, probably from about the time of Frederick II. in the thirteenth century.

This evening I wish to speak more in detail of the buildings generally of the period, and to show you that wherever this new art was cultivated they did not depart from what I hold to be the true essentials of good old art, and that it was influenced and moulded by and was actually based on the Gothic art, which it was actually displacing; that is to say, that in Tuscany the buildings of early Renaissance are clearly and unmistakably buildings of a Mediæval type clothed with Classic detail. That in Lombardy and Venice the palaces and public buildings are only entitled to be spoken of as Classic by reason of their details and ornamentation; and when you go further south to Rome, you can see that the early buildings of the Renaissance period, of which unfortunately there are not many, are to a greater extent based on Roman, and not Mediæval, buildings; because, as far as we are aware, Mediæval buildings were few in comparison with the number of Roman ones. In other words, the Renaissance of Classic art in its early stage did not mean the reproduction of Roman buildings, and applying them as they best could to their own wants and purposes, as we have done in modern times. As, for example, the High School of this city, the Royal Institution, and National Gallery, where the temple

\* For Illustration see last week's *Architect*.

\* A paper read at a meeting of the Edinburgh Architectural Association.



architecture of Greece is reproduced—in a more able manner than has been done elsewhere, but with the result that you have a bad school building and indifferent picture galleries. Or the elegant and beautifully designed but useless portico of the Surgeons' Hall, and the sumptuous and equally useless and meaningless portico to the Commercial Bank; or say St. George's Hall, at Liverpool, a building much thought of, which, viewed from one side has all the features and dignity of a great temple, and is undoubtedly well designed, but from the other side represents a totally different building, reminding one of the tricks in a pantomime.

These early men continued to plan and construct their buildings as for generations they had been accustomed to; but, under the influence of that ruling passion for the revival of everything Classic that took possession of the Italian people, they gradually introduced the mouldings and decorative features of Classic art. This, which I hold to be the distinguishing characteristic of Early Renaissance architecture, and what justifies us in now making use of it, I will endeavour to illustrate in detail by reference to various buildings in different parts of Italy.

I will first ask your attention to a few buildings of the transition period—buildings where Mediæval and Classic detail are used at one and the same time.

The first is the façade of the oldest part of the great hospital in Milan, founded by Francesco Sforza and Bianca Maria his wife. It was begun in 1437 by the Florentine architect Antonio Filarete. The ground floor has an arcade of semicircular arches, springing from pillars with caps like Corinthian ones, and bases and pedestals of the same type. The arches have a square section, with architraves on the face; they are Classic in everything except their want of refinement and accuracy of detail. These arches are not open ones, but only face ones. Between the pillars are pointed windows of two lights. The pillar, with cap and base, takes the place of the mullion in northern Gothic. The sills of these windows, with corbels under them, have an unmistakable Classic origin. Over these arches and marking off the one floor from the other is a broad band or frieze covered with quasi-Classical ornament; then a row of two-light pointed windows, similar to those below, except that by a prolongation of the outside moulding a square form is given to the window head.

The next building I would call your attention to is the Palazzo Isolani at Bologna, very similar to the last one except that the arcade of the ground floor is an open one. The two-light pointed windows above have fluted pilasters, from which the enclosing pointed arch rises. The two arcades of the courtyard of the Ducal Palace of Venice may also be referred to as an example of the transition.

A very good example, dating from the middle of the fifteenth century, is the façade of the *Fraternità della Misericordia* at Arezzo. The entrance is a deeply-recessed semicircular doorway, flanked by two single-light pointed windows. From the piers of the door and windows rise very flat niches with Classic detail. The stage above this is marked off into similar spaces by fluted pilasters, and in each of the side spaces is an important niche formed by pillars, surmounted by architraves, friezes, cornices, and pediments; then comes a handsome cornice of pure Classic detail, surmounted by a projecting balcony carried on corbels of a quasi-Classical character.

If you refer to ecclesiastical buildings of this early period, you will find the same indications of a transition.

We will now take a survey of the buildings where the transition is complete—and I use this word transition not in the sense it has when you talk of the transition from Norman to Early English, where there was not only a transition in decorative work, but a serious and important one in construction. In Italy the transition is one merely of decoration and the system of construction—that is, a crude and imperfect system of vaulting, and the constant use of the arch, circular and pointed, without the buttress—remains the same. We will commence at Venice, and the first building I would call your attention to is known as the *Fondaco del Turchi*, one of the commercial emporiums, of which there are several in Venice. This is probably one of the oldest buildings there. It is built of brick and is veneered with marble. It apparently consisted in height of three floors, but only two showing to the front. The length of the façade is divided into three, the centre space being much larger than the other two. The floor at the Canal level has an arcade of nine stilted circular arches carried on circular pillars; the arcade of the floor above has sixteen stilted arches, carried on circular columns of the same character as those below. The two end compartments are separated from the centre one by piers, and in each there are three stilted arches on the ground-floor and four on the upper. This facial division into three, if I may so call it, is a distinguishing characteristic of the Venetian palaces and houses, and is also to be found in towns subject to the Venetian dominion down to late times.

The next building I call your attention to is the Palace of Doges. The great external characteristics of this building are the two continuous arcades below and the large amount of wall space above. The arcades are what chiefly concern us: they belong to an early and the best period of fully-developed Italian Gothic, but, like all the Mediæval building in Italy, very defective in construction. It is so here, especially at the angles, and the whole system

of arching and vaulting is tied together with iron rods. The upper arcade has double the number of openings that the lower one has, and the arches of the former are ogee-shaped and surmounted by quatrefoiled circles, while the arches of the latter are plain pointed ones.

I will now ask you to look at a group of Gothic palaces on the Grand Canal. I am sorry I cannot bring before you larger illustrations of these. The *Palazzo Foscari* was built in the fourteenth century, and is one of the finest in Venice. It was purchased by the Republic, and was used for housing foreign potentates when they visited Venice. The other belongs to the fifteenth century, and is known as the *Palazzo Giustiniani*.

Let us now see what influence these buildings, or rather the art of these buildings—for I hold that the constructive traditions embodied in them were never departed from—had on the public buildings and palaces of the *Cinque Cento* period. On each side of the Great Square of St. Mark's are two large buildings known as the *Procuratie Vecchie* and *Procuratie Nuove*. These were built as residences for the procurators or churchwardens of St. Mark's, a large and powerful body in the ancient Venetian Republic. The *Procuratie Vecchie* dates from the year 1500. The ground-floor shows an arcade of semicircular arches, and the two upper floors the same, but each arch only half the width of the basement arches—that is, that the width of the basement arch is equal to two of the upper ones. Each floor is separated from the one below by a broad frieze, and the cornice is crowned by a cresting similar to the one in the Doges' Palace. Unfortunately, I have no illustration of this building that I can show you, but you can readily realise what it is from the Doges' Palace, by substituting round for pointed arches and Classic mouldings and ornamentation for Mediæval detail.

Let us now look at some of the houses, and compare them with the Gothic ones I brought under your notice. Here are some Classic ones—the *Palazzo Dario*, the *Palazzo Manzoni*, two of the best of the *Cinque Cento* palaces; the *Palazzo Corner Spinelli*, early fifteenth century; the *Palazzo Vendramin Calerzi*, late fifteenth century; the *Palazzo Balbi*, sixteenth century. The plans of these houses of the merchant princes of Venice are singularly alike in all periods; they are all rectangles, large or small according to the wealth of the owner. The principal front always and one of the sides frequently abuts on a canal. The block is divided into three divisions. You enter on the principal front into the centre division, which forms a large hall; at the end is the grand stair, and a secondary entrance to the narrow lanes running behind all houses; the divisions on each side of this are divided into the kitchen, stores, porters' rooms, &c. On the first or principal floor the centre space is again occupied as a large saloon, and right and left are the private rooms of the family, and this same division is repeated on the upper floors. This plan is the origin of that system of fenestration so peculiar to all the houses in the cities of the Venetian Republic; it is so frequently seen that it may be called the prevailing one. Compare the façades of these with the group of Gothic palaces I described. You have in each a basement floor, often high for the purpose of getting in a mezzanine or intermediate floor; the principal entrance is in the centre, with smallish windows right and left; and on the principal floor a group of windows lighting the central saloon, flanked by the windows lighting these rooms. The same arrangement is repeated on the upper floors, because the plans are the same. The facial division into three is distinctly seen even in the late *Palazzo Balbi*. Wherein do these Classic palaces differ from the Gothic ones? In nothing but their dress or decoration. The men who built these houses worked in as free a manner as those who built the early Gothic ones, and they did not lay aside the healthy traditions of earlier times till corrupted by the life-destroying power of pedantry and academical rules.

In further illustration of this, let us look at the Gothic *Palazzo Pubblico* of Udine, and compare it with a municipal building in Padua, known as the *Loggia del Consiglio*, a very exquisite specimen of the early Renaissance, as the former is pure Gothic, and was probably built in the early part of the fifteenth century. As it is unnecessary for the purposes of this comparison to describe the whole building, we will confine our remarks to the façade. It consists of two storeys, the lower one being an arcade of pointed arches, carried on circular columns which rise from a good base; a balustrade stretches from pillar to pillar, and you ascend to this loggia by a flight of steps. The floor above displays a large window in the centre, composed of five lights, and two side windows of three lights each. The centre window is provided with a balcony, from which the municipal authorities addressed the people; a small moulded string course divides the two floors, and the wall is finished with a cornice. A few coats-of-arms are stuck about the façade, a custom very common in Italy.

The building from Padua is a particularly fine example of the early *Cinque Cento* architecture of the north of Italy. It consists of two floors in height, the whole raised on a basement. The arches of the ground floor are semicircular, and spring from circular columns. There is a balustrade between each pair of pillars, and you ascend to the loggia by a flight of steps. The upper floor displays three windows, the centre one has three and the side ones two lights, and the wall is crowned by a cornice. I cannot



present to you a more complete parallel. In every essential of construction and arrangement the two buildings are alike, and yet the one is pure Gothic, and the other equally pure Classic work.

Let me direct your attention to an important point of constructive superiority the one has over the other. The building at Padua has a pier at each end of the ground floor arcade. The one at Udine has a pillar the same as the Doges' Palace at Venice. The eye at once recognises the pier as the more stable form of constructing the angle of such a building.

Now let us look a little at ecclesiastical architecture. Previous to the Classic era the prevailing architecture of the churches is what is known as Lombardic. A typical example of this is San Zenone at Verona; it belongs to the twelfth century. Another typical example is the abbey church of Chiaravalli, between Pavia and Milan, also of the twelfth century, remarkable for its central tower, a series of octagons with arches on the faces terminating in a cone, all built of brick.

Now, if we turn to the early Classic churches, we shall see that the traditional method of planning and constructing these remains the same as in Mediæval times. For example, San Pietro, Modena, a type of church façade very common in Italy; and here it is preserved, but the detail is Classic. The façade of the Colleoni Chapel, at Bergamo, erected 1476—circular window, Lombard arches. Dome recalling those of St. Antonio, at Padua. Façade of the Certosa, the work of Ambrogio Borgognone, begun in 1473. Lombard characteristics, circular window and arcades. The octagonal feature at the crossing of nave and transepts, evidently based on the same feature at the neighbouring abbey church, at Chiaravalli. The dome of Sta. Maria della Grazia, in Milan, entirely Lombard in treatment. Doorways of Sta. Maria and the Scuola di San Marco.

We will now travel southwards and examine the buildings of Central Italy. All over Umbria and Tuscany there are numerous cities of the Middle Ages, and in all of them are to be found public buildings and houses, more or less entire, of that period. There is one type from which all succeeding varieties spring.

The next stage in development is the introduction of tracery. The lecturer here showed some windows from Florence in a book, and explained the cortile of the Palazzo del Podestà, about 1332, and also compared these with some of the great Florentine and Bolognese palaces.

#### *The Early Renaissance as Worked out in other Countries.*

The aspect of the Early Renaissance can be followed up beyond the limits of Italy. If you go to France, where the change set in later than in Italy, you find the very same steps being taken. There is no sudden adoption of Italian Classic art. The mouldings and decorative detail are gradually engrafted on buildings still eminently Mediæval. Take the Town Hall of Orleans as an example. It consists of three floors, and the façade is divided vertically with pilasters into wide and narrow spaces—the former for the windows, the latter for niches. The ground floor has plenty of wall space, and small square-headed windows, with moulded jambs, and the label mould peculiar to late Gothic. The windows of the principal floor are tall and of two lights, and divided into three in the height by two transoms. Then come a rich cornice and pierced parapet; then a row of two-light windows with transoms, half of their height in the roof, Classic pilasters at their sides, triangular pediments, surmounted by a Gothic finial. The roof is very steep, and is surmounted by a rich Gothic cresting. The details of the niches and figures between the windows are late Gothic, and much of the ornamental detail and the pilasters are Classic.

The house of Agnes Sorel in the same town has a front to the street, with bits of Classic detail introduced here and there, a steep roof with dormer windows, and arches on the street floor. In the court the treatment is still Mediæval, but the entire detail is Classic. If you will refer to vol. vi. of V. le Duc's Dictionary, under the word "Maison," you will see some charming woodcuts illustrating how the change gradually came about in town houses. Down to the end of the sixteenth century, in many places, the houses are distinctly Mediæval in treatment. The house in the Rue St.-Rome, Toulouse, is a good example of this. The ground storey is arched. The door of the stair to the floors above has a constructive fanlight. The windows have mullions and transoms, and, although the roof is flat like an Italian one, you must remember that the roofs of the early Mediæval buildings in this part of France are all low-pitched.

Compare this with the two examples of late Gothic houses from St.-Antoine, and you cannot say that there is any difference in principle, only in decorative detail or dress.

The large châteaux of the noblesse were still planned as Mediæval castles, with such modifications as were gradually transforming them from places of defence and refuge into country mansions, and, although the decorative details are all Classic, the buildings themselves have nothing recalling the temples, basilicas, or other buildings of ancient Rome. The same modification was taking place in ecclesiastical architecture. A notable example of this is the church of St.-Eustache, in Paris. Here the plan is a five-arched church of considerable dimensions; the construction

throughout, including the vaulting and buttresses, is Gothic, and the entire detail is Classic.

The church of St.-Etienne du Mont, the cathedral at Dijon, and some of the churches at Caen, in Normandy, may also be referred to. The church of Tiloloy, in the Department of Somme, is an excellent illustration of this. The whole structure is one of those wide-spanned late Gothic churches not uncommon in France. The west end is flanked by large circular staircases. The roof is very steep and the gable is crocketed; the principal windows are circular and filled with tracery, the niches have the usual canopies and corbels, but nearly all the detail is Italian Renaissance.

Travelling further north, let us see what we find in Belgium. This country, renowned in the Middle Ages for its great manufacturing and commercial enterprise, is covered with towns which were then great and prosperous, and in which you can still see buildings, civil and ecclesiastical, of all periods. The series of photos and lithographs I have here illustrate houses of the fifteenth, sixteenth, and seventeenth centuries, all of which will bear out the proposition I started with—that the Renaissance of Italian Classic art did not in the earlier and healthier stages mean the abandonment of the good old methods of planning and constructing.

We might now cross the Channel and follow up this investigation, but from the comparative poverty of this country in the Middle Ages and the early Renaissance period, compared with the cities and countries of the west of Europe, we are not so well furnished with examples illustrating this; but both in England and in Scotland such buildings as we have of the sixteenth and seventeenth centuries bear out what I say.

I think I have now demonstrated the proposition I started with, viz., that the revival of Classic art did not mean, in the earlier and healthier stages, the reproduction of the buildings of Rome, and that it contained the germs and potentiality of a consistent style of architecture, till all that was good in it was crushed out by the pedantry and dry academical rules of the later Renaissance. At the present moment the tendency is decidedly to revive this early Italian art; and, if a right use is to be made of it, it is important to have a clear conception of its former rise and fall, and the causes that brought these about. It is also important to remember that what is going on to-day is really the third revival of Classic art. The first began in the thirteenth century and continued till the beginning of the present one. The second chiefly belongs to this century, and the third is now in progress, and is better known in the south by the name of Queen Anne. Will this movement we are now engaged in be more permanent than the previous ones? To answer this question it will be worth while to glance briefly at the second revival of architecture. The seeds were sown far back in the last century, and it was a revival of a much more comprehensive nature than the Renaissance of the fifteenth century, because it embraced Greek and Mediæval art as well as Roman. About 1742, the Brothers Langley published a volume on "Gothic Architecture improved by Rules and Proportions, and Geometrically Explained;" and shortly after Walpole erected his historic villa at Strawberry Hill. Inverary Castle in 1745, is what was supposed to be both Gothic and castellated. Fonthill Abbey in 1796; Eaton Hall, Cheshire, 1803—these two latter being ecclesiastic and not domestic in character. In 1750 the ruins of Palmyra and Baalbec attracted attention, and ten years after this Adam published his work illustrating Diocletian's palace at Spalatro. In 1762 the Dilettanti Society began the publication of a series of illustrations of Greek art, commencing with Stuart and Revett's delineations of the remains at Athens. Up to the beginning of the present century the style of the Brothers Adam, which was largely inspired by the effete Roman art of the era of Diocletian, reigned supreme, and that may fairly be called the end of the first Renaissance. Then followed a period of utter darkness, and it is generally admitted that in the early part of this century architecture was at its lowest ebb. The struggle with Napoleon absorbed all the means and energy of the Empire, but at the close of the French war, when the country had time to cultivate the arts of peace, there began in earnest the battle of the styles which has waged with varying fortunes till now. Concurrent with this revival of architecture was the rise of archæology into an exact science, followed by the great Church movement in England; and these no doubt stimulated that passion for correctness, or, if you like to put it, mere copying, which characterises the best work of the present century. Greek and Roman temples, Gothic abbeys and churches and Scotch castles sprung up everywhere, adapted to all purposes indiscriminately, and at any price, and all were tested by their correctness, and pronounced good or bad accordingly, irrespective of the higher aims and objects of architecture. Bad as were the later stages of the Italian Renaissance, there is this to be said in their favour, that their houses and public buildings were, with all their defects, modern ones.

The revival of this century differs in this respect, that it has been pre-eminently an era of reproduction and not adaptation, and it is doubtful if we have come to the end of it. Gothic has for the present, at least, practically been discarded; but is this revival of early Italian art to be more permanent? or are we merely to cull all its beauties and its blemishes, reproduce them, and apply them as indiscriminately as we have done with Greek and Mediæval



art, and, after being satiated, fly off to—well—it will be very hard to tell what? Or, are we to hold fast by those sound traditions of construction and adaptation of means to an end that are to be found by all who carefully study the great works of old? If we do not, then the present fashion will pass away in favour of something else, because early Italian architecture, however well it can be adapted to the various wants of the present day—and there is no doubt that it can be, but not to any greater extent than Mediæval art—is so vitiated by its structural insincerity, derived from the Mediæval art that preceded it, that it contains the certain seeds and signs of decay; and in these days of over-production it will be a rapid one.

If our art is to become a real one, and not, as is too often the case, one very little above the level of that of the scene-painter, we must strive to give it that structural sincerity and—so long as we build in stone and brick—those sound principles of construction which are only to be found by all who search in the Mediæval architecture of our own country, and the solution of this is sufficient to engage the attention of all who desire to see our art, the queen of arts, established on a sound basis.

### THE FORESTRY EXHIBITION, EDINBURGH.

THE foreign exhibitors have already applied for some 4,000 feet of space in the forthcoming Edinburgh exhibition. Sweden and Norway will only be officially represented by collections of forest seeds and contributions of maps and charts, but the timber and pulp and paper industries of these important countries will occupy a space of from 1,500 to 2,000 square feet. From Italy, France, Russia, and Germany many applications are being daily received. Further telegrams from the Viceroy of India have increased the space already applied for, so that the court will include 6,500 square feet. The preparation of the timber trophy from the Andaman Islands, which embraces some grand specimens of the native woods, has been entrusted to Mr. Shillinglaw, Edinburgh. Messrs. Beattie are making rapid progress with the exhibition building, and the directors of the Tramway Company are providing for the largely increased traffic which is to be expected from the influx of visitors, by placing new rails on the Haymarket section of their line. The date of receiving exhibits has been fixed between June 10 and 18, but already the secretary's office is beginning to wear a foreign aspect from the contributions sent from Canada and India, and a large store-room at the Great Northern Depository is getting gradually filled with exhibits from foreign residents who have been unaware of the date of the opening.

### BANKRUPT BUILDERS.

A BANKRUPTCY case, which involves several points of law, and has been before the courts on several occasions, was again heard on the 10th inst., at Truro, before Mr. Montague Bere, Q.C., County Court Judge. The bankrupt, Mr. Alfred Jenkin, carried on trade as builder at Hayle, Cornwall, and from evidence given it appears that when in March, 1883, bankrupt filed his petition, he had two contracts in hand, viz., offices at Tucking Mill, amounting to 1,301*l.*, and Wesleyan Chapel at Porthleven, amounting to 2,465*l.* In consequence of the bankrupt being unable to proceed with the work, the contract for building the chapel was rescinded, and Messrs. Winn & Son, of Helston, finished it in bankrupt's stead. The contract with Jenkin stated that in case he became bankrupt, or failed to carry on the work, he should not be entitled to any further payment.

The Judge, however, ruled that such a clause was not right in equity; and that, after all payments had been made, the balance, if any, between actual cost and contract amount should be paid to trustees in bankruptcy for the benefit of Jenkin's creditors.

The Chapel Trustees now contend that they are entitled to deduct not only all money actually paid on the building, but also the further sum of 40*l.* loss of pew rents, arising in consequence of the work having been delayed for twelve months, and in addition the fees, amounting to 22*l.*, paid to the architect, Mr. James Hicks, of Redruth, for extra services and expenses, and 27*l.* for solicitor's costs. On these points the Judge has reserved his decision. During the hearing the rules of the Royal Institute of British Architects were presented to the Court, to prove that the architect, although paid 5 per cent., was entitled to the further fee of 22*l.* for extra services and costs, but the Judge declined to accept that document as evidence.

In the case of the offices at Tucking Mill, for Messrs. Bickford, Smith & Co., safety fuse manufacturers, the Gweek Company of timber merchants stepped in and guaranteed the completion of the works on condition of the balance of contract amount being paid to them. This guarantee was made in January, about ten weeks before bankrupt filed petition. The Judge, however, decided that as these timber merchants were large creditors they had no right to any profit on the transaction, that they should be allowed out of pocket payments only, and that whatever profit accrued should be paid to trustees in bankruptcy for the benefit of bankrupt's estate.

In the examination of the accounts of the Gweek Company, it was found they paid the architect 21*l.* 15*s.* 6*d.* for quantities which were prepared in the usual way for builders to submit tenders for the work, and which formed a portion of the building contract. The architect was called to give evidence, and stated that when the Gweek Company entered into their guarantee they examined the bills of quantities, together with his estimate of cost for completion of works, and that the sum of 21*l.* 15*s.* 6*d.* was pointed out, and that the first instalment paid to the Gweek Company contained this amount, and he then asked for it to be refunded to him in the usual way. This demand was made in writing on February 14, and the amount was paid in due course. The trustees in bankruptcy contend that this amount should not have been paid to Mr. Hicks, and that it should be refunded by him for the benefit of bankrupt's estate. On the other hand, it was contended that Mr. Hicks was employed by Messrs. Bickford, Smith & Co. to prepare the quantities before bankrupt was known, and that his employers were liable to him for the amount, and that, if the amount had not been paid, it should be deducted out of balance of contract; and, further, that Mr. Hicks could not now be made a creditor to the estate, as he was never employed by bankrupt. The Judge said he would take time to consider his decision.

Another curious point raised was as to the validity of a guarantee made both by Jenkin and the Gweek Company, that the sum of 45*l.* due to certain other merchants should be paid out of balance of contract amount. It appears that Messrs. Rabling & Co. supplied goods to Jenkin, that a guarantee was given by him for payment out of the contract amount, and that it was afterwards confirmed by agreement between all the parties. The question is how far that guarantee is now valid, or whether the amount shall go to bankrupt's estate. Decision was reserved.

Five solicitors, besides trustees in bankruptcy and numerous witnesses, have been engaged from time to time on these various points of law. The bankrupt failed in 1,500*l.*, the assets being 16*l.* and the final balance out of the two contracts, if any.

### EDINBURGH UNIVERSITY BUILDINGS.

THE Tercentenary Festival of the Edinburgh University has given rise to a series of articles in the *Scotsman* on the rise and progress of the University. In recording the history of the buildings the writer says:—"The construction of a southern road into the city must have brought out most forcibly what Principal Robertson had been insisting on for many years—that the College buildings were in a very dilapidated condition, unworthy of the fame of the school, and quite inadequate for the crowd of students taught within its walls. In fact, professors and students had been forced to leave its bounds, and we read of at least one class which met in the High School; the number attending in 1788-89 was 1,090. As far back as 1768 a "Memorial relating to the University of Edinburgh" was drawn up, probably by Robertson, and an attempt made to raise a sum by subscription sufficient to rebuild the College; but the subscription was not successful, and the idea was given up in the meantime. But, when the South Bridge had been agreed on, there appeared "A Letter to the Right Honourable Henry Dundas, &c., &c., on the Proposed Improvements in the City of Edinburgh, and on the means of accomplishing them, 1785," in which the needs of the University for proper buildings and its wants are plainly and fully set forth. The subscription which followed this second appeal was fairly generous, considering the state of the country at the time, 18,009*l.* being collected, "besides 322*l.* 10*s.*, Jamaica money," and very considerable sums came in afterwards from abroad. So encouraged, the Town Council obtained plans for a new college from "Robert Adam, Esq., London, architect to King George III. and to Queen Charlotte," &c., &c.; and a grand ceremonial took place on November 16, 1789, when the foundation-stone was laid with full Masonic honours by Lord Napier, Master Mason of Scotland, "in the presence of provost and magistrates, principal and professors, and many of the nobility and gentry from all parts of the country," who had marched in procession through streets lined "by a detachment of the 35th Regiment," and by that warlike band "the City Guard," and in presence of a crowd of onlookers "which could not be less than thirty thousand." We need not describe the procession—for is it not written in the chronicles of the *Scots Magazine* for November 1789?—nor picture the ceremonial of laying the foundation-stone, for our readers may see that with their own eyes, as the old print of the scene has been republished.

We should like to picture to Edinburgh men, if we could but picture to ourselves, those struggling old college buildings which were doomed to demolition in the year 1789. We have failed to realise them fully, however, for it is strange that we believe there is no sketch of the whole extant, and "pictures in words" are hard to understand. We will tell what we know. The site was essentially the same as that occupied by Robert Adam's classical pile. On the south and west sides, the buildings must have touched, or nearly touched, the lines of Lothian Street and the Horse Wynd. On the east they must have been very much within the line of the present buildings; for the old Library, as shown in Lizar's



sketches, is several feet within the buildings forming the present gateway. South-east, and attached to the old Library, however, was Monro's Theatre, erected some time about 1760; but this must have been already swept away by the South Bridge Street. On the north, the College buildings probably bounded as they do now, for Bower relates that in 1698 a fire broke out in the College Wynd, "and from the narrowness of the lane between those buildings and the college, the Library in particular was exposed to danger;" while Chambers's "Reekiana" informs us that the author was told by Sir Walter Scott that the house in which he was born, at the head of the College Wynd, was cleared away "to afford room for the street"—North College Street, and we remember that this roadway was not very wide. East from the College buildings to the walls of the Infirmary stretched the "College Gardens," and on the south, as shown by Edgar's and Kincaid's maps, the strip between the College houses and the city wall had been planted with a row of trees. Within these bounds the buildings were arranged irregularly in three courts. The one to the south occupied a larger area than the two to the north, and steps led down from the higher level of the southern to the westmost of the two smaller; the latter was the only one in which the buildings formed a complete square—two sides of the eastmost of the smaller squares being formed, so far as we can make out, by a mere boundary wall. We have several general descriptions by strangers of the College buildings—the latest, that in "Topham's Letters from Edinburgh" (Letters 25 and 26), is perhaps the fullest—and these contain much plain speaking about professors and students. All accounts, including that given in the amusing notes of "Theophrastus" on Edinburgh, brought down to 1788 in the appendix of Arnot's History, tell of these buildings being in a "ruinous condition"; and we can fully imagine that they were so, if we consider their age, and take into account that, from the sketches we have of some of them, they look as if they were cheaply built at first. The three quadrangles were approached by two entrances—one on the north, opposite the head of the College Wynd, surmounted by a steeple; the other at the "Potterrow Port," a simple gateway. Some of the houses which were first demolished for the new College buildings are described in the *Scots Magazine* for April 1790, and as the article is fuller than that quoted in Sir Alexander Grant's "Story," we suspect it is the original, and that in the *Caledonian Mercury* only an extract. We need not copy here the Latin inscription on the house of the Professor of Divinity relating the liberality of "Bartholomew Sommervell;" nor that on "the painted board preserved within the Divinity Hall," which, in gilt letters, told of gifts to the Library; nor redescribe the tower above the northern gateway, "12 feet square and six storeys high, or about 80 feet from the ground," upon which "was a pavilion roof terminating with a vane." We only wish we could but see in one of Lizars' engravings the old steeple and the yet older "Duke's lugeing." It is pleasant to know that, although we cannot make out the appearance of the northern face, we can almost trace the whole of the buildings of the southern court. If any one will take Lizars' engravings, executed for Playfair, and compare them with the exceedingly interesting views in Mr. Stephenson's recently published book, he will find that these sketches contain the greater number of the detached houses which formed the southern quadrangle. He will see that, with the exception of the Library, they are all two-storey houses, and that the upper storey of some of them, having "storm windows," must have had low ceilings; he will notice the variety of architecture and the tablets above the doors, on which would be inscribed the name and titles of each several donor; he will, in fine, have fully confirmed Professor Craufurd's account of how the buildings were erected, one by one, as generous citizens came forward with money. The more he looks at these buildings the more he will wonder how the 1,100 students were accommodated, and where the Principal and Professor of Divinity found house-room.

It is not within the purport of this article to relate the "long drawn out tale" of the erection of the new buildings. It is an interesting story, which we do not mean to tell. Suffice it to say, that the first class-room opened was by the Professor of Anatomy, in October 1792—Monro's Theatre having been swept away by the South Bridge Street; that other two classes were provided for, and that building then came to a stop, the subscriptions being all spent; that, in 1801, a grant from Government of 5,000*l.* finished the portion which had stood for some time without roofs; and that at last, a few days after Waterloo was fought, a vote of 10,000*l.* was obtained from Parliament, and repeated year by year until, in 1825, the College was completed. We do not need to describe buildings which every Edinburgh man knows so well, and which each of our guests can see for himself.

**Butchers' Company New Hall.**—The Court of this company have selected the design of Mr. Alexander Peebles, F.R.I.B.A., from amongst those which were submitted to them by invitation for their new hall, about to be erected in Bartholomew's Close, in the City, and have instructed Mr. Peebles to proceed with the necessary works. The design is in the Classic style, freely treated, and the building will contain the hall, court and committee rooms, offices for the officers of the company, a ladies' drawing-room, and all other necessary and suitable domestic and other apartments.



#### Carved Brickwork.

SIR,—In the criticism of the exhibits at the late Building Exhibition by one of your contributors there are one or two remarks with regard to carved brickwork so very erroneous, that, in justice to ourselves, we cannot allow them to pass unchallenged.

He asks, "What is the substantial value of a brick after its surface has been chiselled and carved away, and even undercut?" We answer—the clay used in the manufacture of these bricks for carving is specially manipulated, and the bricks are so burnt as to have the same weather-resisting qualities all through, and are equally well able to stand the severest weather, either built into the building as taken from the kiln, or simply rubbed to a smooth face for plain gauged work, or afterwards carved into the most delicate mouldings. We can give substantial proof of this in some carving executed before the severe weather of a few seasons back; and it may not be generally known that when these bricks have been rubbed to a perfectly smooth, level face, and built in as gauged work, they are a much brighter colour than facing bricks made in the usual way from the same clay, and apparently the same shade of colour when first taken from the kiln; were they *not* well burnt all through, the colour of the rubbed bricks would be duller than those used as taken from the kiln. Again, it is now a well-known fact these bricks are so quickly hardened by wet that many mechanics, if working by task-work, will not use them unless delivered on to the job perfectly dry, and after being put into the building they harden very quickly by the action of the wet and sun.

Again, your contributor says "the carving is done on a material not meant for any carving." With all deference to him, we most positively contradict this statement; for when first taken from the clay bed every particle is most thoroughly washed and passed through *very fine* screens; then, after settling again into a solid substance, and before being moulded into a brick, it is all worked into a homogeneous mass, thereby uniting every particle together in the most solid manner, making the bricks fit to be used for the highest class of ornamental drawing.

We will not trespass further on your valuable space, but enclose a copy of testimonials we have received, and of which we beg your perusal, wherein you will see the good opinion many of the leading architects of the day have of these bricks.

Apologising for troubling you, we beg to remain your most obedient and obliged servants,

April 9, 1884.

THOMAS LAWRENCE & SON.

#### NEW BUILDINGS.

**The Empire Theatre.**—This building, which was partly constructed according to plans by Mr. T. Verity, has been completed, owing to a change in proprietorship, by Messrs. Bywater, under the direction of Messrs. J. A. & E. Bull. One of the principal features in the arrangements is the large space allotted to promenades, foyer, &c. In this respect the theatre is almost unique. In the entrance hall and vestibule are some splendid specimens of scagliola columns and pilasters with gilt capitals, which have been produced by Messrs. Bellmann & Ivey. The grand tier or dress-circle is on a level with the vestibule. Behind its four rows of seats is a range of comfortable private boxes, corresponding in width of area with a space on the floor above, which contributes to the formation of a broad promenade, communicating with a capacious foyer, whence an open view of the stage may be gained. The boxes are carried by wrought-iron cantilevers, which, with the fireproof floors, have been constructed by Messrs. Dennett & Ingle. Large as it is, the foyer is, in its effect to the eye, indefinitely extended by vast panels of looking-glass, reaching from floor to ceiling. The scheme of colour throughout is crimson and gold, and additional richness is given by pictorial designs in various parts. Facilities of exit, in case of need, are favoured by the unusual allowance of unoccupied space over and above the seated accommodation of the theatre. The orchestra stalls number 180; there are 106 reserved pit-stalls behind; and in the rear of these, again, is a capacious pit, with a promenade 12 feet wide, room for 550 persons being here afforded. On each level the supply of lavatories and retiring-rooms is ample. Massive and elegant decorations surround the proscenium arch, 32 feet in width and 35 feet high. The ceiling of the auditorium is circular, and bordered by an elaborate cornice and arcade, the supports being columns and caryatides of colossal dimensions. The length from the proscenium to the back of the pit is 83 feet, the width from wall to wall is 88 feet, and the height from the stalls to the ceiling is 51 feet. All the tiers and corridors are of fireproof construction, and the wood-framing is coated with cyanite.

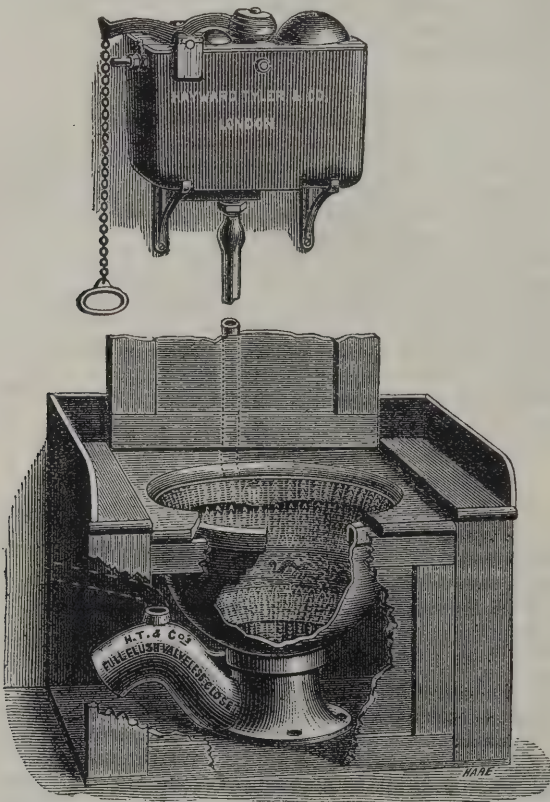
**London.**—The Criterion Theatre, which has been closed since March last, was reopened on Wednesday evening. Since the theatre was closed important alterations have been effected in its



structural arrangements, under the direction of Mr. T. Verity, the architect, and special attention paid to the means of exit in case of emergency. The result is now an abundance of corridor space. To each floor on the theatre are four exits—two on each side—leading to Piccadilly or to Jermyn Street, and there are stage doors likewise giving exit on both sides of the building. An area open from the basement to the sky has been provided on one side of the theatre by the sacrifice of a portion of the space hitherto allotted to the restaurant. Thus fresh air and light are admitted to the building. The auditorium has been greatly improved and brightened. The number of private boxes has been reduced. The electric light has been provided in every part.

### NOTES ON NOVELTIES.

Our illustration shows a form of water-closet which is recommended by the makers (Hayward Tyler & Co., Whitecross Street, London) as being the least expensive closet that can be adopted for houses of the best class, hotels, &c. The arrangement is a combination of their well-known "full-flush" basin, with "Howard's patent" syphon cistern. The full-flush closet has been specially commended by the best judges, having, as far as we are aware, carried off the first awards for water-closets at every exhibition of the Sanitary Institute, the National Health Society, &c., in which it has competed, being in some instances subjected to very severe tests by blacking the inside of the pan to see whether all parts were perfectly scoured at each flush, as well as trying by other means whether the whole solid contents were carried past the trap even



under unfavourable conditions. The appearance of this closet, when fixed, is certainly suitable for the best class of houses, the large pan (very similar to that of the best valve-closets), being handsomely decorated in excellent taste. There is a good depth of water at the bottom of the closet, and it is found in use to be a complete preventive of bad smells or sewer-gas discomforts. There is one subsidiary advantage in closets of this class, that in case of any failure in the regular water-supply from frost, &c., they can always be perfectly flushed by pouring water down, which cannot be so conveniently done in closets of the side-outlet class, these latter requiring the flush to come in a certain direction to carry away the contents of the pan. Hayward's patent cistern has been lately noticed in our columns. It is an excellent cistern, combining the advantages of the single and double-box systems, and is being largely adopted in the New River Company's district and elsewhere. The closet shown in the engraving has the bell-pull arrangement, which is now frequently used, being simpler and cheaper than a handle and cranks, but at a small additional expense the sunk dish and handle on a suitable bracket can be added. When this closet becomes known, it will be likely to prove of great value to architects and builders, especially for villa residences, seaside houses, &c., where it is needful to supply a closet of handsome appearance at small cost, and one not liable to get out of order or cause trouble. It also forms an excellent closet for railway stations and hotels, when the cistern is worked by the opening of the door.

### ART WORKMANSHIP.

**Mosaic Pavements.**—Messrs. Burke & Co. have just carried out two important works in a remarkably short space of time. The first is a mosaic pavement at the head office of the National Provincial Bank of England. Worn-down Portland stone landings had to be worked off, and a mosaic pavement, covering an area of nearly seventy yards, laid between Thursday night and Wednesday morning, no work being allowed between the hours of 9 A.M. and 4 P.M. on the Saturday between midnight of the same day, and 6 A.M. Monday morning, nor between 9 A.M. and 5 P.M. on Tuesday. The time occupied, therefore, on the work *in situ*, allowing for meal-times, was sixty hours, equal to six working days, and one-half the time was taken up in working down the stone. The architect, Mr. Charles R. Gribble, has expressed himself well pleased with the rapidity of the work. The second pavement, which is at the Turkish Baths, Jermyn Street, had to be carried on in a temperature of 135 degrees. The old marble pavement was removed, concrete put in, and a mosaic pavement laid between Thursday evening and Tuesday morning. Messrs. Burke & Co. are carrying out a large order for mosaic paving at the Technical Institute, South Kensington, under Mr. Waterhouse, A.R.A. We may also mention that they a short time ago laid a mosaic pavement at Marlborough House for H.R.H. the Prince of Wales, under Mr. John Taylor, architect. Messrs. Burke & Co. are enabled to lay floors thus rapidly in consequence of having the cubes or tesserae faced by machinery before being gummed on to the brown paper in the usual way, thereby saving the time previously required to sand down the irregular and rough surfaces.

### GENERAL.

**Mr. Whistler** has been engaged in painting views of Cornish scenery, which will shortly appear on exhibition in London.

**The "Hanging Committee"** of the London Society of Artists' exhibition will be constituted as follows:—Messrs. Phil. Morris, A.R.A.; C. B. Birch, A.R.A.; Hamo Thornycroft, A.R.A.; Thos. Brock, A.R.A.; Bernard Evans, J. A. Fitzgerald, S. F. Hodson, W. Hughes, and W. Christian Symons.

**An Exhibition of Portraits** of eminent Scotsmen and women is to be held in Edinburgh during July, August, and September, under the auspices of the Board of Manufactures.

**The London Museums and Galleries** attracted fewer visitors on Monday last than on similar occasions. There were 8,500 visitors to the British Museum, against 16,500 in 1883 and 15,685 in 1882. Last year the number of visitors to the South Kensington Museum was 34,603, while this year the number fell to 22,971.

**Mr. Hodder M. Westropp** will deliver three lectures at the Royal Institution, on "Recent Discoveries in Roman Archæology," on April 26, May 3, and May 10.

**Messrs. Rottman, Strome & Co.** have supplied the Japanese embossed papers which have been used in the decoration of Almond's Hotel, Clifford Street.

**Mr. T. W. Camm** read a paper at the last meeting of the Birmingham Archæological Association upon "Art Aims in Architecture."

**The Death** is announced of Mr. George Milner, who was the contractor for the railway between Manchester and Retford; for the East Lancashire line from Preston through Ormskirk; and for some heavy works in connection with the docks at Liverpool. He was born in 1802.

**A Fund** is proposed to be raised for restoring the roof of what is known as Alderley Old Church, the venerable structure so intimately associated with the memories of Bishop Stanley; his son, Dean Stanley; and other members of the Stanley family. The new chancel screen, which has been in preparation some time, will be opened in the course of a few weeks.

**A Roman Well**, the sides of which are of Sarsen stone, has been discovered in a field opposite the Savernake Hospital, Marlborough.

**South Darley Church** is proposed to be enlarged and improved. It was built in 1840, and designed by the late Mr. Mitchell, of Sheffield, as an exact copy of Noyles church, Normandy. The proposed improvements have been entrusted to Mr. Mitchell Withers, architect, Sheffield.

**A Cottage Hospital** is to be erected at Newbury, at a cost of 3,950*l*.

**Northern Architectural Association.**—A quarterly meeting of this society was held at Newcastle-on-Tyne on the 8th inst., Mr. H. W. Rich, president, in the chair. Mr. Joseph Oswald read a paper, in which he threw out several valuable suggestions, by the adoption of which the association might be made more popular with the profession and more influential with the public at large. A vote of thanks was accorded to Mr. Oswald for his excellent paper, and Mr. Newcombe moved that the question of the best means for giving effect to the suggestions contained therein should be referred to the committee. Mr. Reay seconded the motion, which was agreed to. Messrs. Rich and Newcombe were appointed delegates to represent the association at the conference to be held at the Royal Institute of British Architects in May next.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, APRIL 19, 1884.

### CONTRACTS OPEN.

**ABERGAVENNY.**—April 23.—For Re-seating Holy Trinity Church. Mr. T. Nicholson, Diocesan Architect, Hereford.

**BELFAST.**—For Building Nine Houses. Mr. Gibson, 2 Atlantic Avenue, Belfast.

**BELTHORN.**—April 30.—For Rebuilding Chapel. Mr. J. Yates, Architect, 3 Tackett's Street, Blackburn.

**BROMYARD.**—April 21.—For Building School and Master's House. Mr. A. H. Parker, Architect, 5 Foregate Street, Worcester.

**BOX.**—April 29.—For Enlarging Church. Mr. J. D. Sedding, Architect, 18 Charlotte Street, Bedford Square, W.C.

**BRIGHOUSE AND HERDDEN BRIDGE.**—April 21.—For Extension of Warehouses. The Engineer, Lancashire and Yorkshire Railway, Manchester.

**BROUGHTON.**—April 19.—For Works of Restoration at Parish Church. Rev. W. Wyatt, Broughton Rectory.

**CARLINGHOW.**—April 26.—For Building Parsonage. Mr. Michael Sheard, Architect, Batley.

**CORNWALL.**—April 25.—For Restoration of Church. The Vicar, Colan, near St. Columb.

**DERBY.**—For Building St. Barnabas's Church. Mr. R. Waite, Surveyor, Duffield, Derby.

**DUMFRIES.**—For Additions to Auchencheyne House. Mr. Barbour, Architect, Dumfries.

**EARLESTOWN.**—April 24.—For Building Schools. Messrs. Maxwell, Tuke & Hurst, Architects, 175 Lord Street, Southampton.

**FALMOUTH.**—April 21.—For Rebuilding Bosahan Mansion. Mr. Ewan Christian, Architect, 8A Whitehall Place, S.W.

**FREMANTLE.**—April 26.—For Building Girls' School. Mr. W. J. Bunney, Grosvenor Villa, Shirley Road, Southampton.

**GOOLE.**—April 24.—For Building House and Stabling at Gilbertdike. Mr. D. Scott, Newport, Brough.

**GOUDHURST.**—April 23.—For Repairs to South Aisle of Church. Messrs. Carpenter & Ingelow, Architects, 4 Carlton Chambers, 4 Regent Street.

**HAINWORTH.**—April 26.—For Building School. Mr. Bailey, Architect, 9 Market Street, Keighley.

**HALEBANK.**—April 23.—For Building Railway Stations. The Engineer, Euston Station.

**HOPE HALL.**—April 23.—For Building Four Houses and Shops. Mr. J. Wilson, Architect, 222 Pellan Lane, Halifax.

**HORSE CARRS.**—For Building Coffee Tavern, &c. Messrs. Butterworth & Duncan, Architects, South Parade, Rochdale.

**HUNSLLET.**—April 19.—For Building Two Houses and Shop, Moorside. Messrs. Richard Towse & Son, Architects, Dewsbury Road, Leeds.

**LINCOLN.**—For Building Schools. Mr. W. Scorer, Architect, Bank Street Chambers, Lincoln.

**LINCOLNSHIRE.**—For Construction of Sheds with Iron Roofs, &c., Boston Harbour. Mr. W. H. Wheeler, C.E., Market Place, Boston.

**LLANGAIN.**—April 22.—For Building Vicarage. Mr. G. Morgan, Architect, 24 King Street, Carmarthen.

**LOW WALKER.**—April 21.—For Customs Watch House. Clerk of Works, Post Office, Newcastle-on-Tyne.

**MILNTHORPE.**—April 23.—For Building Six Almshouses. Mr. J. Bintley, Architect, Old Town Hall Chambers, Kendal.

**NEWBURY.**—April 22.—For Rebuilding Canal Bridge. The Engineer, Reading Station.

**NEWTON ABBOT.**—April 25.—For Building Ten Cottages. Mr. E. Webb, Architect, The Close, Exeter.

**NORWICH THORPE.**—May 1.—For Building Railway Station. The Engineer, Liverpool Street Station, E.C.

**OLDHAM.**—For Building St. John's Schools. Mr. H. Cockburn, Architect, Middleton, near Manchester.

**OVERTON.**—April 26.—For Erection of Farm Buildings. Mr. John Hillary, Longparish, Hants.

**PEMBROKE DOCK.**—April 30.—For Construction of Roof over Market House. Mr. F. W. Ladd, Borough Surveyor, Prospect Place, Pembroke Dock.

**PONTYPRIDD.**—April 25.—For Building Chapel. Mr. T. Rowland, Old Post Office Chambers, Pontypridd.

**ROSSENDALE.**—For Building Church. Mr. T. Bell, Architect, 14 Grimshawe Street, Burnley.

**RUSHDEN.**—April 21.—For Building School. Mr. E. Sharman, Architect, Croyland Abbey, Wellingborough.

**STRATHESPEY.**—April 23.—For Building Distillery. Messrs. A. & W. Reid, Architects, Elgin.

**SWANSEA.**—April 22.—For Additions to Board School. Mr. E. Sidney Hartland, 7 Rutland Street, Swansea.

**SWINDON.**—April 30.—For Building Schools. Mr. W. H. Read, Architect, Swindon.

**TEIGNMOUTH.**—April 24.—For Additions to Schools and Chapel. Mr. John Watson, Architect, Lower Terrace, Torquay.

**TIPPERARY.**—April 25.—For Works at Parish Church, Banaha. Mr. W. G. Doolin, M.A., Architect, 20 Ely Place Dublin.

**TRYDDYN.**—April 25.—For Building Board School at Black Diamonds. Mr. Gibbon, Coed Talon, near Mould.

**WALFORD.**—For Additions and Alterations to School. Mr. R. C. Bradstock, Clerk to the School Board, Walford.

**WARLEY.**—May 3.—For Building Parsonage, &c. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

### TENDERS.

#### ALVERTHORPE.

For a Block of Private Offices at Alverthorpe Mills, near Wakefield, for Messrs. Colbeck Brothers. Mr. J. T. Law, Architect, 64 Commercial Street, Batley.

Masons.	
WAINWRIGHT, Earlsheaton (accepted)	£245 0 0
Joiners.	
CHADWICK & SONS, Dewsbury (accepted)	236 9 0
Slaters.	
HARGREAVES, Dewsbury (accepted)	36 0 0
Plumbers.	
J. BROOKE, Heckmondwike (accepted)	59 0 0
Plasterers.	
PARKER, Heckmondwike (accepted)	35 0 0

#### BAMFORD.

For Building St. Michael's Church, Bamford, near Rochdale. Estimates include the whole of the Fabric of the Church and Seating, Chancel Stalls, &c., in Pitch Pine. Mr. HENRY C. CHARLWOOD, Architect.

Neill & Sons, Manchester	£23,769 0 0
Crabtree, Rochdale	3,490 0 0
Horrocks, Heywood	3,484 0 0
Berry & Son, Rochdale	3,288 0 0
Diggle Bros., Heywood	3,268 0 0
PETERS & SONS, Rochdale (accepted)	3,095 0 0

#### BURTON-ON-TRENT.

For Extension of Winshall School Buildings, for the Burton-on-Trent School Board. Messrs. GILES & BROOKHOUSE, Architects, Derby.

Pemberton, Derby	£1,268 0 0
Wildman, Burton-on-Trent	1,250 0 0
Hadfield, Burton-on-Trent	1,220 0 0
De Ville, Burton-on-Trent	1,203 0 0
Stevenson & Son, Burton-on-Trent	1,160 0 0
Wileman, Burton-on-Trent	1,145 0 0
Hodges, Burton-on-Trent	1,145 0 0
Varlow, Burton-on-Trent	1,140 0 0
Hunter Bros., Burton-on-Trent	1,131 0 0
Wheeldon, Burton-on-Trent	1,128 0 0
Chamberlain Bros., Burton-on-Trent	1,070 0 0

## MANUFACTURERS AND IMPORTERS OF MARBLE AND WOOD CHIMNEY PIECES.

QUEEN ANNE  
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AND  
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ART TILES  
AND  
HEARTHES

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And 238 Upper Thames Street, Blackfriars, E.C.—WORKS, ROTHERHAM



## BIRKENHEAD.

Road Works, Birkenhead, Mr. T. C. FORBURN, C.E.,  
Borough Surveyor.

## Wellington Road.

Walsh, Liverpool	£1,982	15	0
Worthington, Liverpool	1,852	5	10
Lea, Birkenhead	1,895	14	6
Smith & Lea, Birkenhead	1,385	3	6
Fawkes Bros., Southport	1,349	5	8
Jones, Birkenhead	1,271	8	0
Sterling, Liverpool	1,201	19	6
RIDDELL, Tranmere (accepted)	1,162	9	1

## Silverdale Road.

Worthington, Liverpool	£612	14	2
Walsh, Liverpool	529	5	2
Lea, Birkenhead	510	5	6
Fawkes Bros., Southport	460	16	10
Jones, Birkenhead	420	17	0
Sterling, Liverpool	403	13	8
RIDDELL, Tranmere (accepted)	375	13	2

## BRADFORD.

For Residence at Frizinghall, Bradford, for Dr. Thompson.  
Mr. J. LEDINGHAM, Architect, 1 New Iyegate, Brad-  
ford.

## Accepted Tenders.

Kitchen & Watson, mason.  
Bogg, joiner.  
Hodgson & Son, plumber.  
Hill & Nelson, slater.  
Throp, plasterer.  
Lupton, painter.

## BROMFIELD.

For Laying and Jointing Iron Pipes, &c., Beck Farm,  
Bromfield, Messrs. PICKERING & CROMPTON, C.E.  
Fisher & Kirk, Cockermouth . . . £381 2 0  
Hill, Carlisle . . . 289 2 5  
McKay, Crookdale . . . 271 8 0  
Waddington, Whitehaven (accepted) . . . 250 6 7  
Slack, Crookdale . . . 248 12 1  
Smith, Workington . . . 211 3 4

## CHARLTON.

For about 1,400 feet of New Road, with Sewers, Elliscombe  
Road, Charlton, Messrs. W. & F. HOUGHTON, Sur-  
veyors, 61 Old Broad Street, E.C.

Graham	£1,450	0	0
Bloomfield	1,250	0	0
Cowdery & Son	1,186	0	0
Pizzy	1,126	0	0
Harris	1,050	0	0
Bell	975	0	0
Reade Bros.	905	0	0
Seaton & Co.	904	5	0
Lloyd	882	15	0
Pound	878	0	0
Jackson	820	0	0
Wilson	800	0	0
Wise & Wilson	759	0	0
Truman	750	0	0
Woodham & Fry	749	0	0

## CHATHAM.

For Building Infirmary at Chatham for the Medway  
Union. Mr. E. W. STEPHENS, F.R.I.B.A., Architect,  
Maidstone.

Trueman & Co., Chatham	£8,695	0	0
Slade, Maidstone	8,550	0	0
Skinner, Chatham	7,803	0	0
Denne Bros., Deal	7,700	0	0
Wilkins, Loose	7,512	0	0
Bull & Sons, Southampton	7,432	0	0
Harris, St. Andrews	7,350	4	0
Vaughan, Maidstone	7,350	0	0
Wallis & Clements, Maidstone	7,344	0	0
Avard, Maidstone	7,233	0	0
Pankhurst & Son, Chatham	7,160	0	0
NAYLOR & SON, Rochester (accepted)	6,993	0	0

## CUCKFIELD.

For Alterations and Additions to Mytten House, Cuckfield.  
Mr. F. W. HOLLOWAY, Architect, Hayward's Heath.

Knight, Cuckfield	£1,270	0	0
Hall, Lindfield	1,075	0	0
Neale, Cuckfield	1,025	0	0
Hunt & Co., Worthing	960	0	0
Taylor, Brighton	890	0	0
Norman, St. Johns	890	0	0
Parsons, Brighton	837	0	0

## DEWSBURY.

For Fence Walls, Roads, &c., Calder Bank Mills, Dewsbury.  
Messrs. JOHN KIRK & SONS, Surveyors, Dewsbury.

Ellis, Batley Carr	£590	0	0
Brier, Savile Town	461	0	0
Chadwick & Sons, Staincliffe	445	0	0
Clegg, Dewsbury Moor	435	0	0
Brier, Son & Wilson, Savile Town	430	0	0
Whitehead & Sons, Ravenshorpe	412	10	0
Kitson, Batley Carr	395	0	0
Hart & Brier, Dewsbury	395	0	0
Parker and Sharpe, Batley	394	0	0
SLINGER, Cleckheaton (accepted)	363	0	0

## DONCASTER.

For Construction of Brick Gasholder Tank (41 feet 6 inches  
diameter, 16 feet 9 inches deep), Doncaster, Mr. R.  
BRIDGE, Engineer.

Worley, Doncaster	£415	0	0
Thorn & Sons, Masboro'	399	0	0
Smith, Mexboro'	360	0	0
Furnival, Doncaster	317	0	0
HAUGHTON, Godley (accepted)	312	0	0

## HUCKNALL HUTHWAITE.

For Erection of Primitive Methodist Chapel, Hucknall  
Huthwaite, Mr. R. F. VALLANCE, Architect, Mans-  
field.

Redwood, Sutton-in-Ashfield	£428	2	0
Keeling, Sutton-in-Ashfield	405	2	0
Fisher Bros., Mansfield	390	0	0
Houldsworth, Hucknall Torkard	330	0	0
DENNIS, Kirkby Folly (accepted)	326	10	0

## HARROGATE.

For Building Bank and Business Premises, James Street  
and Princes Street, Harrogate. Messrs. H. E. & A.  
BOWN, Architects, Harrogate. Quantities by Mr.  
Linley Oldroyd, Leeds.

Taylor & Son, Bradford	£7,360	0	0
Bretford, East Keswick	7,261	0	0
Beanband, Bradford	7,250	0	0
Waterhouse, Keighley	7,045	15	0
Ramforth & Hudson, Harrogate	6,988	0	0
Johnson, Bradford	6,870	15	6
Raworth, Harrogate	6,789	0	0
Ives & Co., Shipley	6,700	0	0
Bentley, Leeds	6,649	0	0
Armitage & Hodgson, Leeds	6,550	0	0
Thorpe, Leeds	6,350	0	0
Nicholson & Son, Leeds	6,138	0	0
LONGLEY BROS., Leeds (accepted)	6,100	0	0

## HORNSEY.

For Construction of Sewers, &c., for the Hornsey Local  
Board. Mr. T. DE COURCY MEADE, Surveyor.Storm Water Culvert and Pipe Sewers, Crouch Hall Estate,  
Cook & Co., Battersea . . . £2,627 0 0Upper Tollington Park and Lancaster Road, N.  
E. & W. Iles, Wimbledon . . . 1,460 0 0Stapleton Hall Road, Victoria Road, and Albert Road.  
Cook & Co., Battersea . . . 853 0 0Clarendon Road to Coothurst Road, Crouch End.  
Jackson & Son, Finsbury Park . . . 520 0 0Oakfield Road.  
E. & W. Iles, Wimbledon . . . 475 0 0Ferne Park Road South.  
Jackson & Son, Finsbury Park . . . 373 0 0

## LINCOLN.

For Erection of new Grammar School in Upper Lindum  
Street, Lincoln, from Plans and Specifications pre-  
pared by Mr. W. WATKINS, F.R.I.B.A.

Martin & Sims	£2,340	0	0
Cowen & Lansdown	2,296	2	0
Walter & Hensman, Horncastle	2,295	5	0
Knight, Martin	2,197	10	0
Bennett, Birmingham	2,197	0	0
Harrison	2,167	8	0
Wright	2,154	0	0
Baines, Newark	2,154	0	0
H. S. & W. Close	2,115	0	0
Crosby & Sons	2,105	0	0
GREENWOOD, Mansfield	2,055	0	4

Cowen & Lansdown	£630	10	0
Bennett, Birmingham	627	0	0
Harrison	623	16	0
Walter & Hensman, Horncastle	616	0	0
Martin & Sims	612	0	0
Knight, Martin	592	10	0
H. S. & W. Close	589	0	0
Wright	556	0	0
Baines, Newark	571	10	6
GREENWOOD, Mansfield	566	4	4
Crosby & Sons	555	0	0

\* Accepted conditionally.

## LONDON.

For Alterations and Repairs to the White Horse, Fetter  
Lane.

## LANGMEAD &amp; WAY (accepted).

For Additions and Alterations to Circus Café, Oxford Street,  
for Messrs. Gianella & Co. (1st Contract), Mr.  
BANISTER FLETCHER, Architect.Mansbridge . . . £2,499 0 0  
NIGHTINGALE (accepted) . . . 1,962 0 0For the Erection of new Premises, Nos. 62 and 63 Basing-  
hall Street. Mr. RICHARD M. ROE, A.R.I.B.A., Archi-  
tect, 37 Basinghall Street. Quantities supplied by  
Messrs. Batstone Bros.

GROVER (accepted) . . . £4,210 10 0

For Office and Show-room Fittings at No. 130 London  
Wall, E.C. Mr. RICHARD M. ROE, A.R.I.B.A., Archi-  
tect, 57 Basinghall Street.Sommerville & Smith . . . £782 11 9  
Sage . . . 686 0 0  
DREW & CADMAN (accepted) . . . 583 4 0For Alterations at Caroline Villa, Woodberry Down, Fins-  
bury Park. Mr. WILLIAM SMITH, Architect.

Lang	£176	0	0
Anley	170	0	0
Shurmur	173	0	0
Larke	188	0	0
Clarke	137	0	0
Stevens	132	0	0
Mattock Bros.	128	0	0
Harper	113	10	0

For Additional Work at Kirkdale, Woodberry Down,  
Finsbury Park. Mr. WM. SMITH, Architect.

Lang	£579	0	0
Anley	570	0	0
Mattock Bros.	569	0	0
Larke	530	0	0
Clarke	527	0	0
Stevens	485	0	0
Shurmur	432	0	0
Harper	393	10	0

For Erection of new Wing to Infirmary, Cale Street,  
Chelsea, for the Guardians of Chelsea. Messrs. A. &  
C. HARSTON, Architects, 15 Lendenhall Street, E.C.

Quantities supplied.			
Nightingale	£9,007	0	0
Johnson	8,817	0	0
Downs	8,483	0	0
Magee & Co.	8,400	0	0
Stephens & Bastow	8,295	0	0
HOWELL & SON, London and Bristol (ac- cepted)	7,951	0	0

## LONDON—continued.

For Erection of Stabling at Lea Valley, Upper Clapton.  
Mr. J. HAMILTON, Architect.

Harper	£425	0	0
Hayworth	347	0	0
Shurmur	315	0	0
Woolveridge	298	10	0

For Alterations and Additions to Nos. 74, 75, 76, 77, and  
78 Judd Street, Easton Road, for the Midland Furnish-  
ing Company. Mr. D. H. NORTH, Architect.

Rider & Son	£2,138	0	0
Woods	2,100	0	0
Colls & Son	1,887	0	0
Gould & Brand	1,792	0	0
Burman & Son	1,738	0	0
Langmead & Way	1,697	0	0
Avery	1,670	0	0

For Alterations and Additions to No. 2 Wilton Road, oppo-  
site Victoria Station, for Mr. Eli Turner. Quantities  
by Mr. Edward Crutchloe, Albert Chambers, Victoria  
Street, Westminster.

Gregory	£998	0	0
Martin, Wells & Co.	880	0	0
King & Son	865	0	0
Reading	819	0	0
Falkner	835	0	0
MACEY & SONS (accepted)	820	0	0
Surveyor's estimate	850	0	0

For Erecting and Completing Model Tenements at Brewer  
Street North, Clerkenwell, for the Worshipful Com-  
pany of Brewers. Mr. E. H. MARTINEAU, Architect.

Mr. W. B. Catherwood, Surveyor.			
Ashby & Horner	£3,220	0	0
Lawrance	3,090	0	0
Conder	3,050	0	0
Longmire & Burge	2,940	0	0
Holland & Hannen	2,769	0	0
Stimpson	2,763	0	0
Bywaters	2,765	0	0

For Erecting and Completing Infant School, High Street,  
Hornsey, N. Mr. JOHN FARRER, Architect.

Conder	£1,740	0	0
R. Conder	1,640	0	0
Greenwood	1,471	0	0
Lawrance	1,400	0	0
Wilkinson Bros.	1,387	0	0
Scrivener	1,355	0	0
Dixon	1,340	0	0
Marriage	1,330	0	0
Kerry & Son	1,300	0	0
Outwaite	1,266	0	0
Smith & Son	1,143	0	0

For Addition of West End and Tower of St Peter's Church,  
Streatham Hill, S.W. Mr. GEORGE H. FELLOWS  
PRYNNE, Architect, 10 Torrington Square, W.C.

Quantities by Mr. R. Henry Hale.			
Walker, Streatham	£5,760	0	0
Piersy & Co., Westminster	4,576	0	0
Mason, Streatham	3,693	0	0
Perry & Co., London, E.	3,515	0	0
Dove Bros., Islington	3,385	0	0
Saunders, London, W.	3,376	0	0
Adamson & Sons, Putney	3,357	0	0
Goodard & Sons, Farnham	3,346	0	0
J. & C. BOWYER, Upper Norwood (accepted)	3,190	0	0
Cowland & Co., Bayswater (amended)	3,044	0	0

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wich Street and Back Manchester Road (South).  
Contract No. 22 consisting of the Sewering, Forming,  
Levelling, and Laying Foundations, &c., in Alfred and  
John Streets. Mr. JOHN PRICE, C.E.

## Contract No. 21.

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Bird, Chorlton	497	0	0
Randall, Weaver	471	19	11
Naylor, Hulme	467	19	8
Lomax, Eccles	398	3	10
Oakes, Kearsley	383	1	6
Worthington, Rusholme	382	15	4
Snappe & Sons, Eccles	360	13	0
Hamnett & Shaw, Ashton-on-Mersey	351	4	6
W. & J. ARMSTRONG, Walkden (accepted)	326	6	0

## Contract No. 22.

G. Unsworth, Moss Side	£428	6	6
Bird, Chorlton	412	0	0
Naylor, Hulme	392	14	11
Randall, Weaver	387	8	0
J. Unsworth, Walkden	375	1	11
Oakes, Kearsley	329	15	7
Lomax, Eccles	320	14	2
Hamnett & Shaw, Ashton-on-Mersey	310	10	5
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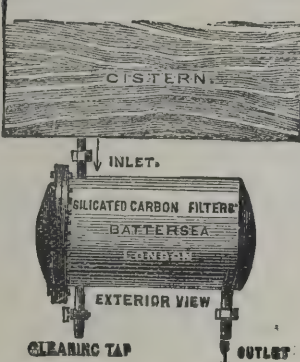
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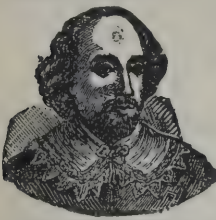


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# The Architect.

## PROPOSED CHANGES IN THE CONSTITUTION OF THE INSTITUTE OF ARCHITECTS.



MEETING of the Institute of Architects was held on Monday evening, which may turn out to be an incident of great importance to the profession at large. It was one of the periodical meetings for the private business of the Society, and the agenda contained three proposals; the first in order being that the voting papers for the election of the Council should no longer show a distinction between the old members of the Council and the new nominees, practically perverting of the freedom of election; the second, that

the foreign secretaryship should be restored; and the third, that the admission of Fellows should be made subject to an examination test. But the outcome of the business as a whole was that the Council have undertaken to promote a consideration of the question of revising the constitution, so as to satisfy generally the demands for reform which have recently become overwhelming.

The first of the three motions is one to which we do not attach much importance, except that there is no doubt a growing desire for freedom of election in all English affairs whatever; the second is a matter affecting materially the dignity of the Institute as the professional guild of a great cosmopolitan and historical art; the third is perhaps a still more important question as regards the status of the profession. The first was put to the vote and rejected, chiefly, we are sorry to say, through the questionable loyalty of the members of the Council, who seem to think it right, in a thin meeting, to vote as one man in favour of their own prerogative. The second was met by an amendment which was at once accepted by the mover as equivalent to his own proposal, but after discussion it was thought expedient to drop the matter for a time, on account of its importance, we may say. The third—that affecting the examination—was allowed to stand over pending an inquiry into certain points of law. But, as we have said, the meeting accepted as an equivalent for action on all such questions for the present an intimation that the Council might be trusted to institute a preliminary investigation of the charter of the Society as regards its efficiency, now that the profession has been gradually changing for nearly fifty years since it was granted.

The remarks made by the mover of the resolution for re-establishing specially the office of Secretary for foreign business, were to the following effect. In former times there were two honorary secretaries appointed in express terms of the charter, one of whom took the home business and the other the foreign. Professor DONALDSON was foreign secretary for many years, and no doubt in that capacity did more than any one else to establish the Institute on the highest artistic and literary ground—now, alas! wholly abandoned. Upon his retirement, Mr. EASTLAKE being the stipendiary secretary, and in rank a Fellow, it was thought to be due to his personal eminence that he should be regarded as one of the charter secretaries, and Mr. COCKERELL was appointed as his colleague to take foreign affairs. This answered very well until Mr. EASTLAKE retired, and Mr. COCKERELL retained office with Mr. WHITE, his successor. But when Mr. COCKERELL died, the foreign business was virtually dropped, and there were several speakers who joined in the opinion that the formal correspondence of a salaried secretary—whose proceedings, we have reason to know, are more than even formal—could not be a proper substitute for such work as used to be done by Professor DONALDSON. It was also remarked that others of the greater objects of the Institute seem to have been dropped of late, and especially that the ordinary meetings are now so conducted that the business is confined to the reading of a paper (the speaker might have said a paper sometimes of very questionable relevancy) and a debate, not by members of the Society, but by invited visitors—a state of things characterised as a most

feeble attitude. We can scarcely doubt that a return to the dignified old custom of the meetings, as well as that of the conduct of foreign business, cannot be long deferred.

The proposal to revise the charter, and of course the principles of government—although adopted by a member of the Council, who considered he could speak for his colleagues—was first made by a private member, and he quoted a considerable list of subjects which had to be looked at as furnishing reasons for such a revision being undertaken.

There is, in the first place, the demand on the part of the provincial members that they should have a share in the direction of affairs, which, in the formula of the age, means a vote at elections and so on. At present they have this privilege, of course, if present at the meeting when the question is put; but it is idle to call this a vote if the voter has to come fifty or even five hundred miles to give it, when the post will deliver it for him in a few hours for a penny.

Then the Associates are asking for some reasonable share of power; and this request, whether it can be wisely acceded to or not, certainly must be courteously considered. A very sensible observation was made by one speaker, that Associates who are eligible for Fellows—by reason of seven years' practice—ought to become Fellows; so that, if it be only the older men of that class who now claim the franchise, this might be a fair answer.

Allusion was made next to the proposals which have recently been talked about respecting the desirableness of establishing a new professional society, as if to supplement the action of the Institute in these days of much flutter and little progress. Such a proceeding, if based upon any real need, might damage the prestige of the Institute, no doubt; but, what is of more immediate moment, we have already to deplore the remarkable circumstance that such leading men as Mr. NORMAN SHAW, R.A., Mr. BODLEY, A.R.A., and Mr. BUTTERFIELD, the gold medallist elect, the representatives of a whole class of more or less accomplished architects in London, and many of the leading provincial architects also, are at this moment holding entirely aloof from the guild. If it be any shortcoming in the constitution or administration of the Society that is to blame for such incidents, the question cannot be too soon gone into. In fact, we may add that the relations which subsist, or rather do not subsist as they ought, between the Institute and the Royal Academy, might be made the subject of another form of inquiry into the working of the charter, which certainly ought not to repel such men, but rather to attract their fraternal adhesion.

The whole principle of examination tests, it was urged, constitutes another subject for the most serious consideration. It is late in the day for such a body as the Institute of Architects to initiate examinations for admission when the practice has been almost overdone by societies of far less pretension, or none at all, to academical rank in the country. It would be easy enough to set up an illusory and invidious test for mere appearance sake, and so disparage a substantial professional qualification as to drive away some of the best class of men for ever. We cannot help feeling kindly towards an extension of the examination principle that is identified with the real advance of knowledge; but the case here is not a simple one, and must be investigated and discussed with the utmost care before any definite steps are taken in the present guild that perhaps cannot be retraced. Another question of the same order is the recently pronounced intention of the Institute to conduct test examinations for extraneous municipal bodies; a proposal excellent in its purpose, but not to be carried into effect without great caution.

Then there is the wide question of unionism, which no doubt must sooner or later be taken up seriously—whether or not the Institute is to become more effectually the headquarters of combined action in matters of professional business. Allusion might, indeed, have been made especially to the flagrant impropriety of what is called cannibalism, when one member accepts from a lawyer a retainer of "advocacy on oath" against another, to help in defeating his ordinary claims, or in throwing upon him extraordinary responsibilities, for the mere sake of turning the penny, an honest penny if it may be, but otherwise if it must.

But apart from all details, perhaps there are few who will be disposed to dispute the abstract proposition that the circumstances of the architectural profession have changed during the last half century almost beyond recognition, so that a charter of the date of King WILLIAM THE FOURTH may well



be looked at inquiringly if it is supposed in any way or by any class of interested persons to operate obstructively or even inefficiently. At the same time, we do not forget that Royal Charters are not nowadays denied the benefit of elastic interpretation when the advancing liberality of the age so requires. We are reminded that the charter was made for the Institute and not the Institute for the charter, and so long as the members run fairly well together there is no one to interfere, and they may do very much what they please with it. What we think most people will approve emphatically is the disposition to revise the practical working of the constitution, and the sooner this is acted upon the better.

### THE BUILDING TRADE GUILDS OF ROUEN.

ONE of the most urgent questions of the present time in England is that which relates to technical education. If we may judge from the elaborate and costly machinery which has been set up in the shape of schools, lectures, examinations, exhibitions, &c., and of which committees of amateurs constitute themselves the directors, it would seem as if the world had hitherto failed to discover how to produce an efficient workman. But in the benighted Mediæval period people had no difficulty in the matter, and in this country and in France they were able to insure that workmen must be either competent or starve. The means adopted will be thought primitive, but they were efficient. It was requisite for his own security that a workman should belong to the guild or company which represented his trade; but to obtain admission he had to demonstrate that he knew his business. He was examined by men who cared little for book-lore, but who were acquainted with the materials and processes of their craft, and if he failed to convince them that he was dexterous in using tools and prudent in dealing with materials, he remained an outsider. The knowledge that was needed was not to be acquired by cramming or by attending a course of agreeable lectures. However glibly a candidate might talk, he failed to persuade his inexorable judges. We may even conclude that if such a phenomenon existed in those days as a man who could discourse upon the history, political relations, or evolutionary development of his trade, the only impression that his oratory was likely to make upon his judges was to convince them that he was a quack.

It is fortunate that in Rouen there still exists sufficient evidence to enable us to understand what kind of tests were once employed in technical education. The records of many of the trade societies of that city have been preserved, sometimes by the modern representatives of the trade, or guild, sometimes by the public authorities. If the documents were translated in full into English, they would show how different the modern system of examination is from the Mediæval. The old-fashioned folks of Rouen knew nothing of tests which can be applied to whole batches of men at the same time, and in parts of the country which are wide apart. They tried their candidates individually, and, in doing so, may have regarded them in an unfriendly way as possible rivals; but, with all its defects, no better system than theirs has yet been substituted for insuring efficiency among workmen. We can only refer to what was done in a few of the trades.

The carpenters of Rouen were recognised under some very old statutes, which were consolidated by HENRY IV. in 1597, and revised in 1652 by the local Parliament. But the workmen do not appear to have had much reverence for the amended laws, and it was necessary for LOUIS XIV. to issue an edict enjoining a better observance of them. In the old days there was a hard-and-fast line around every craft. There seem to have been encroachments by the carpenters and the joiners on each other's provinces, and a long and costly law suit was commenced in 1732 in order to have the limits of the trades legally defined. The carpenters had in consequence to alter their statutes, which were approved by LOUIS XV. in 1739. It may be mentioned that in support of their case they presented His Majesty with an illustrated book on carpentry by MATHURIN JOUSSE. This author lived in the preceding century, and his "Secret d'Architecture," published in 1642, was one of the authorities employed by Professor WILLIS for his excellent paper on "The Vaults of the Middle Ages."

The statute of 1739 therefore represents to us the Mediæval economies of trade in a somewhat modernised form. Accord-

ing to it the Carpenters' Guild was henceforth to consist of masters who had been elected, and was to be presided over by a dean, who was to be a carpenter and over fifty years of age. The Mediæval character of the regulations is seen from the second rule, which says that if the orthodoxy of the dean at any time became questionable he lost his position. A syndic, twelve deputies, and four guardians were also to be elected to manage the affairs of the guild. To be eligible for election, the carpenter was to be a Frenchman by birth or a foreigner who had been duly naturalised. A candidate had to present a certificate to the guardians from his master describing the work on which he had been employed, and the guardians were bound to verify the statements by inspection. He must also prove that he worked four years as a journeyman after serving his apprenticeship. Then he was to undergo an examination into his manual skill and technical knowledge. The subjects were the sizes and qualities of the timber used in construction, the carpentry required in connection with foundations, demolition of buildings, support of party-walls and partitions (a subject to which great importance appears to have been attached); in fact, it had to be demonstrated that the candidate was competent to deal with all kind of work in which wood was employed. Afterwards he had to show that he could draw geometrical figures. Next he was to give proof of his practical skill, by working for a term of twelve weeks with two masters (six weeks with each) who owned carpenters' yards, and obtaining a certificate of capacity from them. But all this was not enough. A meeting of the craftsmen was to be held, and a majority was to determine what kind of trial piece the candidate was to undertake as a final test. It might be an example of a curved staircase, a vault, or a roof, of as difficult a kind as could be devised, and thus involve problems of descriptive geometry. If the candidate carried out the work to the satisfaction of his critics, then, on taking the oath and paying the examiners and society fees, he was admitted to the mastership.

Afterwards, if he worked on his own account, he was obliged to submit to regulations which were as strict as those of a modern trades union. A master could not keep an apprentice in his workshop for more than five or less than three years, without giving notice to the guardians of the guild. He was to employ no journeyman unless those belonging to the guild, exception being made in the case of those who were in the intermediate or companionship stage, and who were to stay for a short time only. He could undertake all works which were defined as belonging to carpentry—in houses, bridges, wine-presses, sluices, piling, cranes, capstans, the arms of windmills, &c., and he had the sole right of supplying the timber; but he was not to meddle with sculpture or other ornamentation. If he infringed the laws by executing joiners' or sculptors' work, he was liable to pay a fine of fifty livres, unless that work was done by him for his own house, and he was expected to give permission to joiners and sculptors to do carpenters' work under similar conditions. A journeyman was not allowed to leave a master until he had completed the work he had undertaken—so long as his wages were paid.

A contract for contractor's work could not be entered into by a man belonging to another trade, and *vice versa*, and architects in their estimates were obliged to price the different trades separately. In some respects the Rouen regulations had many advantages, for masters and workmen were compelled to concentrate their attention on their own craft; a high standard of workmanship was established, and the apprenticeship system was in reality a course of training instead of being one in name only, as it often is at present. But modern political economy would object to the restrictions which were placed on freedom of contract, and by which it was impossible for a man who was without any knowledge of building work to be entrusted with the erection of a house. The old masters and men of Rouen thought of work in the first place; in our enlightened age that position is given to finance, and so long as money is made or lost by somebody, the conditions of the game of life are supposed to be observed. The examinations of the syndics and guardians have developed into negotiations in the parlours of bank managers, and the only trial pieces which are now indispensable are proofs of solvency in securities.

In Rouen as elsewhere it is supposed that when a master mason is mentioned in an ancient document, the term is descriptive of the superintendent of works—the representative of the modern architect—for in Mediæval times there was no distinction between the thought and its realisation. There is



a passage in the register of the Chapter of Rouen for 1398 which relates to the institution of JEHAN SALVART as mason of the cathedral, which has been adduced in support of the theory. He was enjoined to well and faithfully manage the workmen, and do all other things that a good and faithful mason should do in such a case, without fear, favour, love, or hate. But it is supposed that the organisation of the Rouen guild of masons dates from the twelfth century, as it is related that in 1145 a body of masons left the city to construct the cathedral of Chartres. Afterwards all the Norman congregation of masons are supposed to have been invited into one society, which was employed in the Chartrain district, and, on returning, built and repaired several churches in and around Rouen. INGELRAM, the architect of the cathedral, was a notable example of the Mediæval master mason. He also worked at the Abbey of Bec, and his name is found in the chronicles thereof. To mention other names would be to write the history of Rouen architecture. The title of master of works was recognised until 1777, when FONTAINE the architect held the office, and, like many of his predecessors, lived in a house in the court of the Hôtel de Ville. In the eighteenth century there were fifteen or sixteen architects in the city who formed a society, which met in the Rue St. Patrick. Little is known of the working masons of Rouen. The trade must have had a guild—like all other trades—but, if so, the records are lost, or are enshrouded in the mystery which is associated with the craft of the *franc-maçon*.

Judging from the number of regulations which exist, the Mediæval plasterers would seem to have been carefully watched by the authorities of Rouen. In 1289, in 1319, in 1345, and in 1348 the mayors demanded reforms of the statutes of the trade. There were so many by-laws that it was difficult to know what was illegal. As plaster was largely used in the walls of houses, carelessness was dangerous. At length, in 1456, GUILLAUME GOMBAUT, who was Vicomte of Rouen, undertook the revision of the statutes, but he overlooked the necessity of consulting the masters of the trade, and in consequence there was a great deal of clamour against his amendments. Finally the plasterers gained the day. About twenty years later there was another attempt at reform; the masters were induced to take part in the deliberations, and as a result a new series of rules were prepared, and of which LOUIS XI. approved. In framing these rules the danger of fire in half-timber houses was kept in view, and therefore attention had to be given to the construction of chimnies. If there was any deviation from the rules the plasterer was fined, unless he could produce a special order from the owner of the building. An oven which was partly constructed of plaster could not be used until it had been examined by the officers of the trade, and they certified that it was constructed so as to avoid the risk of fire. There was a standard to determine the quality of the plaster, and any deviation from it was punished by a fine, the amount being arbitrary.

In Rouen there were three kinds of covering used for Mediæval houses. The poor used straw and rushes, the bourgeois used tiles, and slates were employed from the fourteenth century for the larger edifices. The men who did this kind of work were recognised under the name *couvreurs* in the reign of CHARLES VI., and, in 1410, through some exceptional liberality, they were allowed the right to use plaster conjointly with the master plasterers, but on the understanding that they recognised the authority of the guardians of the guild of plasterers. It deserves to be noted that the tilers and slaters, unlike the workmen of other trades, rarely worked on Sundays or feast days. The reason of this deviation from the ordinary custom was explained in one of their rules, which stated that as the masters and their servants ascended so high they placed themselves in jeopardy, and it therefore behoved them to hold the laws of God and of the Church in greater respect than other men.

From a statute which dates from 1507, it would appear that the painters and sculptors of Rouen were united in one society. Sometimes the artists are described as makers of images, and sometimes as stonecutters. Even the great JEAN GOUGON is called in the register of the Rouen chapter, "tailleur de pierre et masson." The tradition of art has always survived in Rouen, and has displayed its influence under varying conditions. From the seventeenth to the nineteenth century the city has produced many renowned painters and sculptors, such as JEAN JOUVENET, RESTOUT, DESHAYES, GÉRICAUT, DEFRANCE, SLODTS, JADOALLE.

The old rules of the artists' guild correspond with those which were enforced in meaner trades, and all possible care was taken to insure the best materials and workmanship. A painting was only to be executed on a new canvas made of linen or silk thread, and with enduring colours. For a statue the stone or wood should be selected with care. The guardians, who were elected by all the members, had the right of examining the works. If they found imperfections which could be remedied, they suggested the alterations; but in other cases they were authorised to destroy the picture or the statue. Admission to the guild was obtained by examination. The painters had to produce a picture measuring two feet and a half by two feet, while the sculptors had to carve a figure five feet and a half high of Our SAVIOUR crowned with thorns, a full-size figure of the Virgin and Child, or a panel with eight figures representing a scene from the New Testament.

The painters on glass had a guild of their own, but under similar rules to those described above. For example, a rule made in 1496 says that the candidate for admission is to produce two panels for trial pieces—one is to have for subject the Crucifixion, and the other a figure of the Blessed Virgin. It is plain, from what we have said, that in all the trade societies practical skill held the first place, and it was rightly considered that the best judges were men who, from their talents and experience, were recognised masters.

## LUXEMBURG.

[BY A CORRESPONDENT.]

TWO chronograms (giving the dates respectively of 1871 and 1851), cut in the rocks on the picturesque road from Luxemburg to Eich, and on the old *route des glacis*, record the dismantlement of what was once the impregnable stronghold of Europe, second only in importance to Gibraltar:—

ArVa patent, CeDVnt rVpes foVeæqVe repLentVr;  
eXsVLtiant CIVes, trVX qVà Mars ante fVrebat.

(Fields lie open, rocks yield, and fosses are filled up;  
The citizens rejoice where grim War used to rage.)

fIt VIa VI, CoLLes DIscEDite, sVrgItè VaLLes;  
asCensV faCILI sVperet IVga CeLsa VIator.

(A way is made by force, rocks cleave asunder, valleys rise;  
The traveller mounts high summits by an easy ascent.)

At the Treaty of London in 1867, the Great Powers, on guaranteeing the neutrality and independence of the Grand Duchy, stipulated that its fortified capital should be thrown open. The Grand Duke (the King of Holland) who guaranteed that this proviso was carried out, as far as might be possible with such a natural fortress, visited the city about this time last year, and gave his *quitus*, or certificate, that the work of dismantlement had been duly performed.

Though the origin of Luxemburg (Luxemburgum, Lützelburg) is shrouded in legend, wherein the Devil plays an important part, historians generally agree that the castle was begun by the Roman Emperor GALLIENUS, about the year 260. In the eighth century it was given by CHARLES MARTEL to the Abbey of St. Maximinus of Treier or Trèves. In 963 it was acquired by Count SIGEFROI of Ardenne, who gave in exchange a more valuable property, and afterwards repented of his bargain. He, however, restored the ruined walls and towers of the castle, and fortified what has proved to be the nucleus of the present city, which increased so rapidly that in 1050, and again in 1393, it was found necessary to extend the walls. It is not surprising that this accumulation of all the systems of defence from the Middle Ages to modern times, coupled with its situation on a rock, surrounded on all sides but one with a deep ravine, to say nothing of the good workmanship and materials which rendered powder necessary, should render its dismantlement a work of time and difficulty.

The one side not naturally fortified was, however, thrown open first of all by razing the walls. And then the city, which had been so long pent up, breathed again, as it were; and this long breath caused it to expand in a marvellous manner, and extend out into the country with a gradually increasing arc. The space formerly covered by casemated walls and embattled towers was laid out in smiling parks and promenades, which are yearly growing in beauty as the trees attain larger proportions. This year the prosperous state of finances enables the Government to set apart the sum of 100,000 frs.,



or 4,000*l.*, for embellishments to Luxemburg and its environs. The prevalent style of architecture is the Neo-Greek or French Renaissance; but a few Mediæval turrets appear here and there, as if they had been left from the olden time and were incorporated in the modern edifices. Such was the rage for building, when sites could first be obtained, that wages rose 20 per cent. higher than they are at the present time. Everybody wanted to build at once, and tried to outdo his neighbour. Means for this rivalry soon poured in abundantly; for, during the Franco-Prussian war, Luxemburg furnished supplies to both the armies, and many a fortune was made in six months. The value of private houses built since 1867 amounts to nearly 91,000,000 frs., or 360,000*l.*, and building is still being carried on in all directions on the outskirts, while in the centre of the city a number of historical edifices have been restored and transformed. Among the new public buildings, the Casino, built at a cost of 200,000 frs. (8,000*l.*), is quite an ornament to the city.

During the thirty-four years since 1849, no less than 120 churches and chapels have also been built in the country (only 979 square miles in extent), of which fifty-five were designed by the State Architect, M. ARENDT. Among these is the Chapel of St. Quirinus, in the low-lying suburb called Grund, at the bottom of the ravine, which was restored last year at the cost of the State. It is an old heathen temple, dating from the time of the Romans, and the place where the blood of the sacrifices was poured may still be traced. Originally a mere grotto, hewn out of the solid rock, it has now a façade of masonry, with turrets and pointed window. A curious external pulpit, triangular in plan, has also been preserved and restored.

Luxemburg, though the cradle, as it were, of many personages famous in history, is singularly destitute of statues. There is, however, one notable exception, in that of the beloved Princess AMELIA of Saxe-Weimar, consort of the no less venerated Prince HENRY of the Low Countries, who was the Grand Duke's representative between 1867 and 1879. The statue, looking towards the city, and surrounded by a green bower, is effectively situated at the end of the Avenue de la Princesse, at the park entrance. Mounted on a marble pedestal, it is placed in the centre of a hemi-cycle, reached by several steps, and is surrounded by a balustrade, with marble tablets bearing the names of the twelve cantons. The statue, cast in bronze, was modelled by M. PETRE, of Nancy.

Both the Prince and the Princess died at the château of Walferdange, an elegant structure, but without any architectural pretensions, that serves as the residence of the Grand Duke or his representative. The road from the city of Luxemburg affords some romantic views, especially that part between the capital and the pretty village of Eich. Here are some iron-works belonging to METZ & Co., the largest ironmasters in the country. Herr EMIL METZ, the manager, lately appointed President of the Chamber of Commerce, has made a collection of ancient hearth back-plates—called in French *taques de cheminée*—not merely from Luxemburg, but also from neighbouring countries. M. ARENDT has also a few that are very curious. The Luxemburg Hôtel de Ville contains the collection of ancient and modern paintings and works of art left by PESCATORE to the city. A museum of antiquities is attached to the public library, which contains many rare manuscripts.

### PARIS NOTES.

M. TROUILLEBERT has been authorised by the Tribunal of the Seine, in his action against MM. Tedesco Frères, to produce evidence to show that he was the painter of the picture *La Fontaine des Gabourets*, the attributing of which to Corot gave rise to the suit. As forty of his landscapes are to be sold shortly at the Hôtel Drouot, the public will have to decide upon the merits of his work before the judges and jurymen who are dealing with the particular case in litigation, and the result of the sale is looked forward to with no little interest in artistic circles.

In the competition for the Duc Architectural Prize, worth 4,000 frs., only three sets of plans were sent in, one by M. Armand, of a residential villa; another by Albert Ballu, of the new Law Courts to be erected at Cherbourg; and a third by M. Vandozer, for a bridge of fine arts. The architectural section of the Academy has decided to divide the prize equally between the two last-named

competitors. The plans were on view to the public from Friday to Monday last in the Caen Museum at the Institute.

The Salon Jury of Sculpture has elected M. Mathurin Moreau, president; M. Thomas, vice-president; MM. Etienne Leroux and Blanchard, secretaries. The task of examining exhibits was commenced last Monday.

The Spanish Government is said to be on the point of demanding the permission of the French authorities for the removal to Madrid of the remains of Goya, the celebrated painter, from Bordeaux, where they now lie in the vault of the Gojchea family at the Chartreuse cemetery. The tomb is not well kept, and the Latin inscription composed by Don Pio de Molina, the alcade of Madrid, and a friend of the painter, is scarcely legible. In 1824 Goya came to Bordeaux from Spain, went on to Paris, where he found his old comrade David, struck up an acquaintance with Vernet, returned to Bordeaux, and remained there until his death in March 1828.

The Prefect of the Seine has given his sanction to the erection of a statue of Berlioz, the musical composer, in the centre of the Place Vintimille. He has also authorised the placing of a statue to Dr. Paul Broca in front of the Medical School at the corner of the Rue de l'Ecole de Médecin and the Boulevard St.-Germain, with the proviso, however, that should it become necessary to widen the street, the Anthropological Society, who are erecting the statue, shall bear the expense of shifting it.

The annual general meeting of the Society of French Painters, Sculptors, Architects, Engravers, and Draughtsmen is to be held this day (Saturday), at two P.M., at the Ecole des Beaux-Arts, under the presidency of M. du Sommerard, a member of the Institute. The report for the year 1883 will be read by M. Guillaume Dubufe, and one-fifth of the managing committee will be renewed by election.

In a newly-published French work, "*Souvenirs du Règne de Louis XIV.*," by M. de Cosmac, we find some curious correspondence between M. de Bordeaux, French Ambassador to England, and Cardinal Mazarin, relating to the purchase of tapestry, pictures, marbles, and other art treasures belonging to Charles I., which were put up for sale in 1650 by order of the Parliament. The majority of the pictures and most of the tapestry purchased by the Cardinal at this sale, and taken over to embellish the Palais Mazarin, are now to be found either at the Louvre or in the National Collection of Furniture known as the Garde-Meuble. It is interesting, therefore, to find mentioned in the correspondence above referred to some of the prices paid on that occasion. Correggio's *Antiope* was secured for 4,500 livres (the livre is about equivalent to the present franc); Titian's *Venus del Pardo*, 7,000 livres; Raphael's *St. Michael and St. George*, 2,000 livres; the same painter's *Portrait of a Young Man*, 1,000 livres; and Jules Romain's *Triumph of Titus*, 800 livres.

The magnificent tapestry representing the "History of Abraham," executed according to the designs of Vouet, and estimated to be worth 40,000 livres, was considered too dear by the Cardinal, who refused to buy it. This reserve price proved, moreover, higher than anybody in England appeared able to afford at that epoch, and the work was allowed to go to Spain. It turned out that the cautious churchman had acted wisely, for it was presented to him later on by Philip IV. on the conclusion of the Peace of the Pyrenees.

Still another relic of old Paris is doomed to disappear. There exists in the Rue Nicole—a small street running parallel to the Rue St.-Jacques, and ending on the Boulevard de Port-Royal—a pretty little chapel of the time of Louis XIII., known as the Chapelle de la Vallière. It was in this miniature place of worship that the unfortunate mistress of Louis XIV. performed her devotions when she became a Carmelite nun, after the transfer of the fickle monarch's affections to Madame de Montespan. The convent close by in which she resided has long disappeared, and the chapel itself is now threatened with demolition. A suggestion, which it is to be hoped may be adopted, has been made that it should be removed to one of the public gardens, such as the Luxembourg, which is not far off.



Church robberies in Paris and its suburbs have been very frequent of late. Many have been perpetrated under circumstances of singular audacity, and, although the object of the thief is, of course, convertible plunder, they generally manage, in addition, either inadvertently or out of pure wantonness, to do great damage to the art treasures with which these edifices are crowded. Thus, last week some parties, as yet unknown, obtained entrance to the church of St.-Germain-l'Auxerrois by breaking through the priceless stained-glass windows on the side of the Rue de l'Arbre-Sec, and descending from the opening thus made into the body of the church by means of a rope. Six offertory boxes were either picked or broken open, and their contents, averaging about twenty francs, abstracted. The thieves left hammers and scissors behind, and the rope which they had used was found attached to the bars of a window opening upon the Rue des Pretres-St.-Germain. The vestry had also been entered, but the thieves had not been able to force the cupboards, and nothing was taken from this portion of the church.

#### OFFICIAL NOTES ON FOREIGN TRADE.

**D**URING the year 1883 the sum of 88,000 frs. was expended in the completion of the tide harbour works at Brest. The dredging of the harbour to a depth of 7 mètres 50 centims. below the lowest tide was also terminated. The long promised dry dock, so much needed in a harbour of refuge like Brest, has, however, not yet been commenced, which greatly interferes with the repairs of shipping, so frequently entering the port with serious damage. The facilities for repairing ships, save in the Government Dockyard, remain stationary and without any signs of early improvement, a fact most detrimental to the commercial interests of the port. The construction of two quays has been commenced at Paluden. The masonry for a lighthouse—to be worked by electricity—has been completed at Créach, in the Island of Ushant. Plans are being prepared for the construction of a quay and other works at Lorient, which will cost 500,000 frs. Save the erection of numerous school-houses in the three departments of Finistère, Côtes du Nord, and Morbihan, and the improvements of roads in the interior, no public works of importance have been lately undertaken; and those commenced in 1882, such as new boulevards at Brest, &c., have not made much progress, especially of late, in consequence of the unfavourable financial position in the Finistère.

The present financial and commercial state of affairs in Brest offers an advantageous opportunity for the establishment, not only of a bank conducted with capacity, prudence, and with ample funds, but of a mercantile firm or association possessing a clear capital of from 10,000l. to 15,000l., and determined to break with the antiquated system of providing the whole department of Finistère with a large portion of its requirements from Paris, and other distant interior towns of the country, in lieu of drawing them from more direct sources—a system making their cost, saddled with heavy expenses, exorbitant, and Brest, as a residence, one of the most expensive cities in France.

It is reported from Cherbourg that the importation of Portland cement has more than doubled in the last year. This is due mainly to the dry dock and other works being carried out in the arsenal; but notwithstanding that companies have been formed in France for the manufacture of imitation Portland cement, the appreciation of the British cement is steadily increasing, so that it is supposed that the introduction of this article will continue on a large scale.

The preliminary concession granted to Mr. Grainger to establish a system of tramways at Cherbourg is now about to become definite, as the scheme, though curtailed, has been submitted to the public for their verdict of *commodo* or *incommodo*, and it is certain their decision will be favourable. As now proposed the tramway would commence at Tourlaville, whence it would be carried by the suburb of Val de Saire to the drawbridge, thence follow the eastern quay of the floating-dock to the railway station, and then continue by the western quay of the dock through Cherbourg to the entrance of the arsenal, whence it would be prolonged to Equeurdreville and Querqueville, the total distance being about 11 kiloms. The fares proposed, subject to the sanction of the Government, are:—First class, 10 cents for first kilom. and 5 cents for each subsequent one, no fare to be less than 15 cents; second class, half the above, no fare to be less than 10 cents. Military and sailors in uniform half-price. Persons employed in the arsenal, in or out of uniform, are to be conveyed from either end to the arsenal in the mornings, and *vice versa* in the evenings, at the rates of 20 cents first class, and 10 cents second class. It is confidently expected this tramway will be undertaken in the present year. When completed it is calculated to confer benefit on the arsenal workmen, in saving them the wearisome walks to and from their work, and giving them more time to attend to their own affairs.

The success or otherwise of the enterprise depends upon the circumstances as to whether the mode of conveyance proposed will be popular with the workmen—a question which is not devoid of an element of uncertainty.

The timber merchants at Honfleur overstocked themselves in 1882, and consequently the imports of timber have decreased. In 1883 38,600 standards of deals and timber were imported from Russia, Sweden, Norway, Canada, and the United States, against 44,500 in 1882, and 38,700 in 1881; 8,500 steres of oak timber from Germany, against 16,500 in 1882, and 10,500 in 1881. There was some improvement in timber for railway works. Ninety-five thousand sleepers were imported from North Germany, against 33,500 in 1882, and 64,300 in 1881. The works on the new dock at Honfleur, which is 400 mètres long, and will be prolonged 400 more, are actively carried on. The extension of the dock will cost 600,000 frs., towards which the Chamber of Commerce gives 200,000 frs. The Chamber will also supply two steam and four hydraulic cranes, and will construct a patent slip, and a shed, 175 mètres long, to warehouse merchandise in. These improvements will cost 1,200,000 frs., but no extra charge will be levied on shipping, only the 45 c. quay dues now levied will be continued.

The Palais de Justice (the old Normandy House of Parliament) has been completed on the Rue Jeanne d'Arc side, at Rouen, and is very creditable to the architect, who has so well followed out the example of his predecessors in the fifteenth and sixteenth centuries. The new museum and library in the Rue Thiers, inaugurated some two or three years ago, is now being considerably enlarged on the side overlooking the Solferino Gardens, and there are new cavalry barracks being built on the St. Lever side of the river. An exhibition building is in the course of construction on the Champ de Mars, for the industrial produce of a region of twelve Departments. All the available space is bespoken, and there is to be, besides the useful, an exhibition of works of art, and it is expected that it will be opened some time in the course of the summer.

The works for the enlargement of the port of Dieppe, which were commenced in 1881, are not being carried on with great rapidity, but still a certain progress is being made. They consist chiefly of the setting back of the east pier in order to obtain in the channel a minimum width of 70 mètres; the lengthening of the west pier; the reconstruction of the quay wall of the steam packets; deepening the channel by 2.50 mètres, by dredging both inside and outside the port; cutting a new channel through the suburb of the "Pollet," to gain access to a new outer basin, to a half-tide dock, and to a floating dock to be constructed in the present retenue; the creation of a dry dock—the flood-gates are to be 18 mètres wide, and their sill will correspond with the level of zero of the charts. The work of setting back the east pier, and of the construction of the new docks will probably be completed in 1885.

A sum of 80,000l. has been credited to the works on the floating basin of St. Malo for the year 1884, and it is expected that the basin will be opened to shipping towards the end of the year. In the outer harbour of St. Malo the reconstruction of the great landing slip (so called) of Dinan, which serves chiefly for the traffic carried on by steamers and ferry-boats going to and coming back from Dinard, has been completed. A survey is being made of the jetties used at low water in order to ascertain by what means they can be improved, but no decision has as yet been come to. The rebuilding of an old embankment of about 330 yards in length, which on the north side protects the row of low sand-hills which extend from St. Malo to Paramé, and which afford shelter against the encroachment of the sea to the extensive lands behind them, is to be undertaken this year.

In Brindisi solicitude has been awakened in regard to the unsatisfactory state of the harbour. The annual grant of 80,000 fl. for the necessary repairs, dredging, &c., has been replaced by a lump sum, given by the Government to last over a period, for putting existing works into thorough repair and carrying out new ones. A new embankment in the inner harbour is to be made, and the existing coal wharves at the entrance to be transferred to it, and thus disoccupy, enlarge, and deepen the entrance by dredging. Besides these works, about a third of the existing embankment is to be replaced by a new one of concrete blocks. This latter work has already been commenced. But in view of what is proposed to be done, and done efficiently, as it is desirable it should be, the grant of 500,000 frs. is considered inadequately small.

A report from Berdiansk, in Russia, states that new and very extensive shops have been built, and large stocks of goods brought down from Moscow and other towns. The civilised custom in large towns of having attractive and expensively fitted-up shops is



gradually becoming recognised there, and the business transacted appears to improve in proportion. Concerning ironmongery goods, it may be said that some improvement is noticed in the quality of Russian make; but it is remarkable how difficult first-class goods are to be obtained. Of course, the market does not require any very superior quality; cheapness is the great point. A great scarcity is always noticed of the celebrated Demidoff iron. A slight increase in price is made almost every year, but still the supply is deficient, and shopkeepers are unable to obtain all they require. Foreign iron is not kept in stock, nor would it be saleable. Immense progress is being made amongst the German colonies in the district. Steam flour mills, starch factories, breweries, machinery works, foundries, and other industrial occupations employing thousands of hands are to be found, and the class of workmen and mechanics are vastly superior to those of a few years ago.

### SIR F. LEIGHTON ON SCOTTISH ART.

A BANQUET was held in the Drill Hall, Forest Road, Edinburgh, in connection with the tercentenary commemoration of the University. The toast of "Literature, Science, and Art" was proposed by Earl Wemyss, who described the President of the Royal Academy as a highly-cultivated English gentleman, a great orator, whose powers of speech were as highly finished as his painting; a sculptor, the admiration for whom would endure as perennial as the bronze of his great work—a man struggling with a python.

Sir Frederick Leighton, in responding, said:—Although the command to respond in the name of art is not laid on me now for the first time, never has it been laid on me under circumstances approaching in interest and significance those under which this spacious hall is thronged with guests to-night. To dwell upon the profound signification of the celebration which has gathered together such an illustrious assembly in the Athens of the North would be in me obviously an impertinence, but I would ask leave to say that to be permitted to respond to a toast on such an occasion is an honour which I prize very highly, and that honour is much enhanced by the characteristically graceful and eloquent and indulgent words of my friend Lord Wemyss. Sir Alexander Grant, acting in the name of a most distinguished body, has beckoned to the four quarters of the globe, and from the four quarters of the globe, from the far ends of this Empire, and from every land in which intellect is held in reverence, men to whom that reverence is common have been gathered into your northern city to do homage to the famous seat of learning of which he is the head, to bear witness to its high service in the past and in the present over every field of thought, to hail with augury of undimmed renown its entry upon this fourth century of its career—some of them to receive a distinction which will not be least among the sources of their pride. My gratification at having my name coupled with this toast is far from unmixed, for I have been bidden to rise immediately after two men of world-wide fame, and though I am, indeed, proud that, mainly, no doubt, through the accident of my official connection with the Royal Academy, I am permitted for the nonce to be *in solchem Bunde der dritte*, I am disturbed by a sense of unworthiness to be so honoured, a sense which is not wholly effaced by the kind words with which my name has been brought before you. I have, nevertheless, one sense of comfort—there is one grace with which to deck my words, and I propose to use it largely, and that is the grace of brevity. Custom has long sanctioned the union in one toast of science and literature with art, and, as it seems to me, rightly, for whilst these beneficent forces work by methods widely different, and have each their separate and clearly marked domain, yet they do not work in enmity, but rather with mutual aid and interchange of service in the building up and illuminating of our spiritual life, each bringing to us its special ray of light from the great central flame of truth, all three together purging our minds of the error, if it exists, that any one of those rays is the whole truth, and keeping alive in us the sense that these are many and manifold waves from the far-hidden central source of light towards which men strain their eyes for ever and in vain. Between science, the seeker after the causes of what is, and those graphic arts whose vehicle of expression is the outward semblance of things, the gulf might seem to be almost impassable; but do we not see standing between them a noble link, an art which binds and blends in harmonious consent the achievements of science, the flights of the imagination, and every fascination of form and colour? I speak of architecture. Between literature and art, on the other hand, the links are so obvious that in any case which is not characteristically artistic the danger is great, lest the outlines of their several provinces may become blurred, to the detriment of both, but especially of art. Both have, indeed, man and nature for their theme; both strive to clothe in forms of beauty poetic emotions and noble thoughts; but to the one time is assigned as its field, and to the other space. The one leads us along through chances and contrasts of successive feelings and events; the other attracts us by the contrasts and harmonies, and by the emotions arising out of them, of forms which are embraced at one glance and at one moment, and these limitations

cannot be ignored with impunity. The arts to which the toast alludes are no doubt those which are conventionally called the fine arts. There is, however, yet another art not included in it, but which it is impossible to shut out from our minds when we are considering the relations of intellectual and imaginative forces—namely, the art of music, in which more than in any other they are closely welded together. Music flings across a warp of purest science a fiery woof of passion. Like literature, music unfolds her riches in a lengthened chain; like art, she deals with abstract qualities of form, and she has in melodious sound the very counterpart of colour. I am the more bound to say this to-night—indeed I say it on all occasions—for according to my creed, which is perhaps rather an obsolete one, but according to my firm belief Art is at her noblest when she and her sister Music are most closely kin. I am presuming on your patience, but I would ask before sitting down to be allowed to express my very warmest wishes for the thriving in this land of the arts for which you have permitted me to speak, and I do so with fraternal sympathy, not only as one who boasts himself a member of the Royal Scottish Academy, but as one mindful of the honour which Scottish artists have reflected and are reflecting upon that great institution which it is my pride and privilege to represent here to day. One of the most striking characteristics, if I may be allowed to say so, of Scottish art is its tenacious nationality. We live in days in which national individuality in art is readily blurred, and the tendency to absorption, as far as this kingdom is concerned, in the voracious Babylon by the Thames, cannot but add dangers to the levelling spirit of the age. You must recollect with the more pride that physiognomy of Scottish art retains in the South its sharply defined features. Many elements have conspired to make that art what it is—the strenuous and original temper of the race, the various elements of which that race is composed, the influence, perhaps, of contact in days when art was young with an eminently artistic foreign people; but, above all, the rare charms of the scenery in the midst of which it has grown. True it is, if I may whisper it at this table, that the heavens weep as often as they smile; I dare not say more often at these enchanted scenes, and that shadow follows sunbeam more swiftly than sorrow treads upon the heels of joy. But these vicissitudes in the shifting tempers of the sky only deepen, as I think, the enjoyment of those intervals of splendour that transfigure all your land. Speaking as one who has seen many lands, under many skies, and who has sojourned on three continents, I say, and I say it without hesitation, that in none is colour so royally supreme as in your own country, when the sun's gold is shed on your purple hills, and when the corn stands yellow along the steel-blue lochs. These are the glories in which genius has dipped her many-tinted wings. May she soar on those wings to further and yet more brilliant flights.

### A CONVERSATION WITH MR. RUSKIN.

A CORRESPONDENT of the *Pall Mall Gazette* reports a conversation he has had with Mr. Ruskin, at Brantwood, near Coniston. He describes Brantwood as a beautiful, rambling house with spacious rooms and low ceilings, commanding a view which is unsurpassed in England for picturesqueness and poetic beauty. In the drawing-room dwarf and other book-cases stand against the walls, and there are drawings by Prout, D. G. Rossetti, and others, as well as Mr. Ruskin's drawings of the interior of St. Mark's, at Venice. The library is enriched by a greater profusion of works of art. Numerous exquisite water-colours of Turner hang around the room, a marvellous example of Lucca della Robia's faience ("fashioned by the master's own hand and absolutely perfect," Mr. Ruskin said) decorates the chimney-piece, book-cases and drawers full of minerals line the room, and beautiful books are scattered about in artistic confusion. Mr. Ruskin showed some of the "lions" of Brantwood to the correspondent. He went to one of the cases and pulled out a drawer containing blocks of stone in which were large masses of dark-blue opal. "There! never before, I believe, have such gigantic pieces of opal been seen, and certainly not possessing that beautiful dark-blue colour. Oh, yes! I'm very strong in stones; my collection of agates is the finest in the kingdom, and I am at present assisting the British Museum in this department. The diamond I am at present exhibiting at the Museum is unique in crystallisation on that scale—I gave 1,000*l.* for it. But look—look at these books." The volumes to which he pointed were the original manuscripts of several of Scott's novels. "I think," he said, taking down one of them, "that the most precious of all is this. It is 'Woodstock.' Scott was writing this book when the news of his ruin came upon him. Do you see the beautiful handwriting? Now look, as I turn towards the end. Is the writing one jot less beautiful? Or are there more erasures than before? That shows how a man can, and should, bear adversity. Now let me show you these beautifully engrossed manuscripts of the tenth, twelfth, and thirteenth centuries. I know of no stronger proof of the healthy condition of the Church at that time than the evidence of these books, when they used to write their psalm-books so beautifully, and play with their initial letters so artistically. Yes,



the faces in all such manuscripts are very badly drawn, but that is because the illuminators were rather sculptors than artists—in our sense of the term." The correspondent continues:—This reference to art encouraged me to ask what he thought of art in England at the present day? Mr. Ruskin shook his head mournfully. "I have only stopped grumbling because I find that grumbling is of no use. Besides, I am afraid of an action for libel—as in the case you know of—if I open my mouth; and if I cannot say what I choose about people I do not look at them. I may briefly say that I believe that all the genius of modern artists is directed to tastes that are in vicious states of wealth in cities, and that on the whole they are in the service of a luxurious class who must be amused, or worse than amused. I think there is twenty times more effort than there used to be, far greater skill, but far less pleasure in the exercise of it in the artists themselves. I may say that my chief feeling is that things are going powerfully to the bad, but that there may be something, no one knows how or when, which may start up and check it. Look at those drawings of Turner—there is nothing wrong in them; but in every exhibition there is something wrong; the pictures are either too sketchy or too finished; there is something wrong with the man—up to the very highest." "Are you satisfied with the result of your teachings?" "Certainly not! not in the least; I have made people go wrong in a hundred ways, and they have done nothing at all. I am not," he went on, rather bitterly, "an art teacher; they have picked up a few things from me, but I find I have been talking too much and doing too little, and so have been unable to form a school, and people have not been able to carry out what I say, because they do not understand it."

"Yes, I give far more care to my lectures than to my books. They are for the most part written most carefully, though I sometimes introduce matter extemporaneously in the delivery of them. I have taken more pains with the Oxford lectures than with anything else I have ever done, and I must say that I am immensely disappointed at their not being more constantly quoted and read; and this applies not only to the last series of my Oxford lectures, but to them all. What have I ever done better than this?" As he spoke Mr. Ruskin took down a volume of his "Aratra Pentelici," and read the concluding passages of one of the lectures in his own powerful and impressive manner. "There," he said, closing the book, "I have never written more closely than that, and they will recognise this one of these days. And I may tell you a piece of news: if I am spared another six years I shall have a school of my own. Turner liked the Royal Academy, and he was not often wrong. Its members have always been very kind to me, and I believe to everybody else. But its fault is that it is not an 'Academy'; it sets an example of no style, and it teaches its pupils no principles."

At this moment the clouds, which had obscured the sun hitherto, rolled away. "Now," cried Mr. Ruskin, "you will be able to see the full beauty of the view. Come and look at it from the dining-room: it is finest from there." Then, turning from the window, he called my attention to several pictures that the room contained. "Do you see that picture inscribed 'J. W. M. Turner, sua manu'?" That is a portrait of himself when he was only sixteen. That is a grand Titian—that old Doge over there; and this picture, which recalls Sir Joshua's *Banished Lord*, is a portrait of my father by Northcote. I always rejoice to think that my father had the good taste and the good sense to have his portrait painted by so clever an artist. He was no mean draughtsman himself." As we passed back to the library, he continued: "Prout, of whom you have seen several beautiful examples here, is one of the loves which always remain fresh to me; sometimes I tire somewhat of Turner, but never of Prout. I wish I could have drawn more myself—not that I should have done anything great; but I could have made such beautiful records of things. It is one of the greatest chagrins of my life."

"Can you tell me anything," I asked, "with respect to Lupton's failure to satisfy Turner in mezzo-tinting his *Calais Pier*? You no doubt saw Mr. Lupton's letter on the subject the other day?" "The truth," said Mr. Ruskin, "is very difficult to get out of any expression of Turner, and I believe that he was very apt to be dissatisfied when he saw the colour of his pictures in chiaro-oscuro. I know the facts of the case well; and I think that there was nothing that Lupton could not do. Assuredly Turner did not mean to imply that there was any incapacity in his engraver at all; but when colour is altered to black and white it often happens that the relative size of the objects appears to be altered too."

"Now that I am getting old," said Mr. Ruskin, in reply to a question of mine, "and can climb about the hills no longer, my chief pleasure is to go to the theatre. I told you just now that I could always enjoy Prout; in the same way one of the only pleasures in my life entirely undiminished is to see a good actor and a good play. I was immensely pleased with 'Claudian' and Mr. Wilson Barrett's acting of it; indeed, I admired it so much that I went to see it three times from pure enjoyment of it, although as a rule I cannot sit out a tragic play. It is not only that it is the most beautifully-mounted piece I ever saw, but it is that every feeling that is expressed in the play, and every law of morality that is taught in it, is entirely right. I call that charming little play 'School' entirely immoral, because the teaching of it is

that a man should swagger about in knickerbockers, shoot a bull, and marry an heiress. As regards the literature of modern plays, I think that in comedies the language is often very precious and piquant—more so in French than in English pieces; but I know of no tragedy, French or English, whose language satisfies me."

"The main work of my life, said Mr. Ruskin, "and it will be continued to the end of it, is the ecclesiastical history that our fathers have told us, and the natural history connected with my mineralogical collections. I am writing various catalogues in illustration of these collections, which I am giving my best time and care to. Besides, I am still editing Miss Alexander's book. Look at her drawings," he went on, as he drew some of her illustrations from a cabinet. "Never before have I seen such perfect penmanship—to say nothing of her knowledge of the flowers she draws. Now, before you go come up to my bedroom, and I will show you something worth seeing." He led the way upstairs, pointing as he went to some of Turner's sepia drawings which decorated the staircase. "From this room you will get the finest view of the lake. But it was not for that I brought you up. Look round at these masterpieces on the walls. There are twenty of Turner's most highly finished water-colours, representing his whole career, from this one, when he was quite a boy, to that one, which he executed for me. There is not one of them which is not perfect in every respect. I am much exercised as to how I shall leave these beautiful drawings after my death, so as to be of the greatest service to the public. As it now stands, in case of my sudden death they will all go to Oxford, but I cannot quite make up my mind as to what is the best to do. Here you see what is probably the most beautiful painting of fruit that Hunt ever did, and it hangs among the Turners like a brooch. Yes, I hold this to be the finest collection of perfect Turner drawings in existence—with one exception, perhaps; and the nation shall have it."

## STEPS AND STAIRS.\*

THE everyday ordinary things which we deem of little importance often contribute most to our ease and enjoyment. So also the simple devices which we think not worth the while to study or understand in very many instances lead the way to knowledge and wealth. How commonly it occurs when our attention is thoughtfully called to the origin or appearance of some very familiar object, to its ancientness, usefulness, or beauty, as it may be, to exclaim in our amazement, "How singular we never thought of that before!" As queer and yet commonplace a subject as could well be imagined is the one which I have chosen, and to which the above remarks may be applicable. Ask the question—how many have considered or even thought of it, or if they have, could conceive of anything surpassing, in connection with great antiquity, a device more useful and simple than the ordinary common building step, or, in a little broader sense, "Steps and Stairs"? It is not a little difficult to believe that while man, through his ingenuity, has attained the position he now enjoys, especially in architecture, after ages of experience, he has in steps and stairs made no proportionate progress, and that the primitive modes of ascent and descent remain in almost every respect the same to-day as they were thousands of years ago. Even the open ladder, with its rounds and sides, which we see everywhere, is but the counterpart of that which was used by the builders while rearing in gorgeous majesty those glorious edifices the ruins of which command the admiration of the appreciative world. With these same kinds of ladders or steps did besiegers scale the walls of the beleaguered cities and fortresses, and in the softer amenities of life did many a Romeo, no doubt, gain his Juliet's balcony, ages and ages ago. In the cathedral at Nuremberg there is very cleverly worked, in the architectural decoration of the canopy over the pulpit, an idea of a ladder, suggested, it is supposed, by the story of Jacob's dream, and therefore deemed as ecclesiastically appropriate by the sculptor Kraft, who flourished about the end of the fifteenth century. The steps and raised terraces which are so commanding and pleasing in our realisation of a grand and imposing structure, are the old-story similes, only diminutive in comparison to those of the temples away back in the remoteness of the Egyptian Ptolemies and Rameses; upon whose steps, courts, and pavements, dynasty after dynasty trod, knelt, worshipped, and passed away. The temples of Assyrian greatness, almost sublime because of their elevation, owed their grandeur to the countless steps and numerous terraces by which they were approached. The vast amphitheatres—the Coliseum and that of Verona and others—with their dark masses of elliptical masonry, tier upon tier of steps and galleries, are greater than modern science has built, and as good as we can construct even now out of the same materials. Nothing simpler or more suitable could be devised than these benches of stone. Nor does it seem possible that they can ever be supplanted by any substitute. The idea of a step is identical with our first efforts to creep. Nature shaped it in the eternal rocks, and it shall for ever endure. It is true that the

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modern lift or elevator has become both fashionable and necessary in meeting the requirements of crowded cities and lofty buildings, but even this contrivance is rarely under any circumstances inserted or used to the exclusion of steps and stairs.

If we for a moment consider how many questions there are involved in the planning of a good stairway, the constructive problems concerned in its execution, and its importance as a subdivision of a building, we cannot but see that it is a subject which demands the greatest attention. The mechanical construction of detail, of which this paper, at this time, does not intend to treat, belongs to the science of stereotomy, *i.e.*, of cutting solids to certain conditions of structure and equilibrium. Without some knowledge of the principles of this science no one can successfully cope with the difficulties to be encountered. It seems to be a law of nature that the sectional angle of steps should not vary from 45 degrees, and that a step is best proportioned when its top plane or tread is twice as wide as the rise or step itself is high. Assuming that the most convenient, easiest pace of average people upon level ground is 24 inches, and that 12 inches is the most natural height to rise when the ascent is vertical, and with this distance to govern the movement in ascending or descending steps, a rule asserts itself, which requires that when the riser or step is higher than one-half of a foot, or six inches, that the top plane or tread must be less than one foot in width, and that when the riser or step is less than half of a foot or six inches in height, that the top plane or tread must be wider. For instance, if a step, taking eighteen inches as a controlling factor, were six inches in height, the tread or top plane would be twelve inches in width. If the step were eight inches in height, the tread would be ten inches in width. If the step were four inches in height, the tread would be fourteen inches wide, and so on, &c. Furthermore, it is a fact, both remarkable and paradoxical, that a stair which is very easy of ascent is not always so of descent.

In any building the stairway claims an incontestable right, and next to the entrance is the most useful and prominent feature. Staircases, says Palladio, will be perfect if they are spacious, lighted, and easy to ascend. How many are there already built, and daily being constructed, which will bear the scrutiny of such ruling? How many are spacious, well lighted, or easy to ascend? In connection with the above desirable qualities might be asked the all-important first and foremost question: "How many are safe?" Safe for human lives, because of their strength; safe because of their protection against fire and disaster. It would be an almost hopeless task to ascertain the origin, early construction, and gradual artistic development of the staircase. It has been found located for most part in all of the noted remains of ancient architecture, but occupying remote and obscure places. The fact has been thought singular that Vitruvius throws no light upon staircases, and that the discoveries of Pompeii are equally as silent. This, in a measure, may be accounted for, because of the ancients building their temples and houses but one storey high, and enjoying their balmy climate on the terraced roofs, balconies, and walks. During the existence of the Roman empire especially, and in the decadence of the Republic, the residences of the rich were built with the most extravagant appointments. As the middle classes at the dawn of civilisation rose in power, domestic architecture began to develop. The skill of the Romans throughout Europe became widespread, and the principles of the Roman villas guided the builders in the planning of the houses of the Middle Ages. Yet, even in the residences of the wealthy, the stair when used was but a number of steps, very confined, exceedingly steep, rude, and narrow. When, for comfort or protection, buildings were built with more than one storey, circular steps or stairs began to be adopted, which revolved, as it were, around a solid newel, in shape not unlike a corkscrew, and were known by the name of "turnpike" stairs.

However, there are no known examples wherein ancient stairs ever corresponded in grandeur with the modern staircase. It was not until the twelfth or thirteenth centuries that architecture began to show a healthy development, and later, about the middle of the sixteenth century, that stairs and staircases attracted much attention. Sir Henry Wotton, who was much interested in the subject, says: "To make a complete staircase is a curious piece of architecture." Sir Henry's plan was a straight vista of staircases, each with landings receding from the other, from lower to uppermost storey. Since that time an elegant staircase has been acknowledged the most useful and most decorative feature in the interior arrangement of a building. In noble edifices, more particularly, the corridors and staircases impress us as to appropriateness and magnificence: by first impressions we are fain to judge of the whole, when, in fact, we have seen but a part. It is equally true of the stairs in our houses. If, when entering, we are to be favourably impressed, our halls and stairways must possess all of the attributes of space, symmetry, strength, and adaptation.

I here take the liberty, for which I trust I may be pardoned, to say that the departure from these rules in the arrangement of our dwellings is one of the glaring mistakes of our profession. Narrow, dark halls and cramped-up stairs now exist, where there should be a generous amount of walking, moving, and standing room; where the life-imparting properties of good wholesome air could circulate from basement to skylight, and each room opening

into said halls could receive its fresh supply; where daylight could shine in to brighten up the darksome interior of the house; where the stairs should be ample and easy, with frequent landings, so that the aged, the women, and the children, and the crowd itself, could make a hasty exit without fear of broken necks or limbs. Yet, not always is the architect or builder free to exercise his own taste or judgment in the planning of them. On the contrary, they are oftener forced to exert their greatest skill and ingenuity in combating surroundings and conditions which impede and are antagonistic to safety, convenience, sanitation, and good taste. For it must not be lost sight of that in earning his livelihood, the architect has very often to serve two masters—one his art's inspiration, his labour of love; the other, the inflexible exactions of his sometimes uncultivated client.

It is obligatory upon us to construct securely and to exercise every precaution for the safety and protection of life and limb. No retribution is too severe for the man or body of men who build for selfish gain, to the disregard of such precautionary measures. The day is close at hand when the width of doors, halls, corridors, and stairs, and the number of them, private as well as public, shall be determined by a factor of safety proportionate to its seating capacity or the maximum number of occupants that a building is to contain.

A few suggestions, when upon the subject as to the proper location of stairs, how built, &c., might not be out of place. Certainly no stair should be put up unless sufficiently strong to support any kind of a reasonable stationary or moving load. It should be absolutely fireproof—steps, supports, railings, walls, doors, floors, and roofs. There must be frequent landings or rests. No winding steps. The flights in each storey should be continuous, one over the other, or following each other, each flight to increase in width as they approach the ground floor, and to be well ventilated and lighted. The safest stairway is not that which is placed in the interior of a building, subject to danger by fire in halls, passages, and partitions which are not fireproof. Even though the stairway itself and its parts be invulnerable to fire, the great danger would be from smoke suffocation. If the entire building were non-combustible, this objection might not avail. No stairway is so entirely independent of surroundings as when fireproof and placed on the outside of a building, and no stairway is so near perfection, as far as safety is concerned, as the straight, short flight or receding one, with well located landings, continuous from first to top storey, and so exempt from turns or returns that no such hindrances could interpose or obstruct a straight-ahead exit from top to bottom. Sir John Soane claimed this direct or "avenue" stair as his favourite one for public buildings. It is said that he did really construct some elegant edifices after this plan. A ball, rolled down from the uppermost storey upon such a stair, would not stop until it had reached the ground.

Following the example set us by the most cunning of animals, there should be in every building and habitation a way to get out entirely separate from the one to get in. There is no questioning the right of way out of a burning building. Every one tries to save himself. "Self protection is the first law of nature." The fewer impediments, the quicker out of danger. Palladio argues "that a staircase should be at the entrance of a building, and the first thing to be seen." While this is good advice, it does not always admit of good architectural treatment. The leading idea in every staircase, as advocated by Walton in his treatise on stair building, "should be easy ascent, and the straight line broken by a proper number of stages in the most direct movement of the body." Winding stairs or steps, as a rule, are an abomination, and if the statistics of the loss of lives and injury caused by them could be arrived at, it would be seen that many more accidents happened thereby, after buildings were tenanted, than ever occurred during the dangers and hazard of construction. *Æsthetically*, a winding or elliptical staircase, describing its curves of grace, is pleasing to the eye. But is it beauty when we know how difficult it is of construction? The steps of winding stairs are not parallel—one end too wide, the other too narrow, leaving but a space in the centre or run of the steps, as the only suitable place for ascending or descending. With such uncertain footing they are manifestly objectionable, and were it not for a railing to guide, would not with perfect confidence be tolerated. The only real advantage derived from the use of winders in stairs is economy of space. The landing stair, on the contrary, with its short flights or easy stages in mounting, square and spacious and in perfect repose, conveys in its "make up" precisely what it is—a simple, substantial, appropriate piece of work, commending itself to practical common sense. In our climate, where we have such intense extremes of heat and cold to contend with, in the construction of continuous flights of stairs, especially in our dwellings, schools, and similar buildings, it would be advisable, wherever practical, to enclose each flight or story in separate compartments, as it were, not only to cut off the progress of fire or smoke, but to prevent the great waste of heat which naturally rises to the highest point at the cost of comfort to the lowest.

Our public halls and theatres, tenements and flats everywhere, are for the most part a lamentable attestation that steps and stairs are too few, remote, and inefficient when danger is imminent. The quiet amusement afforded by the seating of an audience



disarms us of the apprehensions we feel upon entering a building badly arranged for sudden exit, and it is only when everybody attempts to leave at once that we, finding how difficult it is to, snail-like, make way through the dense and helpless crowd, can truly appreciate the horror a cry of fire would produce. To get you in is the showman's business; to get yourselves out is your own business. The horrible holocausts which have from time to time occurred, even in our own memory, have served but little to improve the old style of entrances and exits, and insure greater protection to human life. Does a theatre, or hall, or hotel, burn up and wipe out of existence scores of people, the newspapers preach the sad lesson while the funerals are taking place. The agony, after a while, is supplanted by the next or some other dire calamity. The building in the meantime is rebuilt, but practically the same as before, excepting that a few more doors may have been made to open outwardly, a fire-escape added, several fire-extinguishers arranged in conspicuous places, and, perhaps, some lengths of hose purchased; but in all likelihood these will be found, when required, about as serviceable as lifeboats at sea—of no use when most needed.

Probably the most dangerous combination that exists, and one which should in all cases be avoided, are elevator stairs, as it were, enclosing and winding around the elevator from basement to roof, forming an immense chute or shaft, which, in the event of fire occurring at no great distance from it on any storey, would resolve itself into a huge flue to suck up with tremendous power, through its burning crater, every vestige of combustible material below.

And, again, as to the practical utility of the outside iron fire-escapes. Nine out of ten would intimidate the ordinarily resolute man in an attempt to descend them, to say nothing about expecting a delicate, frightened woman, in the midst of a fire excitement, to find her way down to terra firma on them. With a safeguard of some kind (composed say of iron netting) over them, to prevent the escaping occupant from the possibility of falling, greater beneficial results would follow. They should be made more like stairs, well fortified with railings, and their adoption and quantity made compulsory. The horrors of jumping from burning windows would then be avoided by repetitions, at every storey, of iron balconies, and numerous covered stairs connecting them. Build fire-proof and thereby reduce the risks and dangers of fires. A single life saved is worth a world of selfish gain. It is much better that we let splendour and æstheticism remain in abeyance until the appeal of humanity is answered, and life no longer jeopardised. Give us laws which will compel the accomplishment of these suggestions, and such heart-rending, sickening recitals as that of the swallowing up of a whole family by smoke and flames, as occurred in the Stanton Street fire, New York, recently, will cease. The tenement death-traps, which are such a stultifying commentary on our civilisation, laws, and Christian nature, should not be tolerated. Every city, town, and village should hold it as its highest privilege to have every church, hall, theatre, school-house, mill, factory, and tenement house generously and amply provided with every means for instant escape therefrom. Perhaps, in addition, we might add, and justly too, that all places for the above purposes, should be located on the ground-floor. Were this the rule, the dread of attending public places would be greatly lessened, and the poor tenant with his little family in his tinder-box habitation would feel safer and happier. For humanity's sake, then, may we not fondly hope for equal recognition with the lower and more valuable animals, and live to see the time when societies for the prevention of cruelty to humanity will be just as popular as those for the prevention of cruelty to animals.

Municipal commissions for the examination of buildings, and coroner's juries, are inefficient and uncertain, and it would seem that righteous sentiment, outraged by the total indifference shown to the constantly occurring warnings, must sooner or later become aroused, and remodel or obliterate in our buildings all vestiges of such glaring causes for alarm; instituting, as we before ventured to suggest, some practical factor of safety which the present or modern character of our houses necessitate, and which will entirely revolutionise old theories and establish a rule that would prove infallible throughout the land. When that sensible time arrives, and this danger is, as far as possible, avoided, we feel humbly certain that such simple subjects as "Steps and Stairs" will be found invested with the importance they so justly deserve, and the influence and power they may exert in the construction of buildings will be universally paramount and peremptory: second to none.

#### ENGLISH EXCAVATIONS IN EGYPT.

THE excavations which are in progress at Sān or Zoan in Egypt at the cost of the Egypt Exploration Fund give employment to a large number of native labourers, under the direction of Mr. W. Flinders Petrie. According to a writer in the *Times*, some ten or twelve shafts have been sunk at different points, and about thirty-five huge trenches, varying from 7 feet to 24 feet in depth and from 50 feet to 400 feet in length, now radiate

from all parts of the central area. This wholesale ploughing has brought to light successive strata of foundations, pavements, and superstructures of all periods, so laying bare the progressive history of the great temple, and showing how it finally became filled up and buried. The last process was the work of centuries. There were, it seems, two outer enclosures, the earliest being of very remote antiquity, and the latest dating from the reign of Piseb-khanu, of the twenty-first dynasty. Piseb-khanu's wall is of incredible strength. It extended round three sides of the building, and it is yet standing to a height of about 20 feet. It is 80 feet thick, and built of colossal bricks about eight times the size and weight of our modern bricks. Of these, according to Mr. Petrie's calculation, the wall cannot have contained fewer than three or four millions. In process of time (perhaps during the Persian period) houses were built up against this wall. These would in all likelihood be the houses of priests or temple servants. Later on, in Alexander's time, houses began to be built against the side of the north gate. Later still, under the Ptolemies, the wall was considerably cut about and houses were built on it. Finally, during the Roman period (*circa* A.D. 300), the washings of the wall filled the temple itself with mud to a depth of over 6 feet, burying the ruins of the fallen portico, the hypostyle hall, and all the fore part of the building. Some of the beautiful red granite obelisks, however, to judge by the deeper deposit upon which they lie, must have remained erect till about A.D. 1000. This is no fanciful sketch. Mr. Petrie has unearthed these ruined houses, and their chronology is determined by the coins and pottery found in them.

A curious interest attaches to the excavation of private dwellings. Inscriptions and statues are more historically precious; but the pathetic relics of what was once a home affect us more nearly than the monuments of priests and princes. Among those built on the top of Piseb-khanu's wall, an artist's house has been discovered, and adjoining the house a block of workshops. Some Ptolemaic coins, and a jar made by a Greek potter, with "ΜΟΥΣΑΙΟ. . . ." stamped upon its broken handle, date the house and its occupant. It may be inferred that the old artist was engaged on the decorations of the temple. Himself long passed away, he has left his sketch-book and indiarubber behind him; his sketch-book being a thin slab or designing tablet of fine limestone, and his indiarubber a lump of "block emery." The tablet is ruled in squares, its surface much degraded by frequent rubbing, and the corners quite rounded from perpetual wear. His rubbing-stone has also been found, and among the *debris* of the workshops several pieces of waste stone, also ruled in squares, have turned up. Another block of workshops on the opposite side of the temple appears to have been occupied by jewellers and metallurgists, whose chippings of lapis-lazuli, obsidian, carnelian, and other choice stones, besides a great quantity of copper "droppings" and copper slag remain to tell the tale. Most interesting of all these parasitic buildings, however, is a very old pre-Ptolemaic house, partly destroyed in ancient times by fire, and situate on the top of the great wall east of the temple. Discovered more than a month ago, this house has from time to time continued ever since to yield fresh finds. The objects are curiously miscellaneous, consisting of funereal statuettes, bronze deities, and all kinds of amulets, pottery of many periods, jars, cups, plates, saucers, amphoræ, toilet vases in alabaster, bronze vessels, a bronze armlet, a quantity of iron staples, six massive bronze ferrules, belonging apparently to the legs of a couch or table; and, more uncommon than all the rest, a number of rusty iron knives of the time of the twenty-sixth dynasty. The most precious relic of all is, however, a charred wooden case, filled with rolls of burnt papyri. Though these rolls are blackened, broken, and brittle, the demotic writing is yet legible on some; and one little papyrus is quite unharmed and perfect, strings and all. Another seems to be blank, and the box, which may have belonged to a copyist, also contains a bundle of *calami*. A large heap of burnt garments of different textures, the carbonised threads still holding together with sufficient strength to bear removal, was found near the box. The house and its contents are altogether somewhat mysterious. It may have been a den of thieves and tomb-breakers, who here divided their spoils and burnt what they did not care to keep. Discoveries of this kind stimulate the interest with which an archaeologist looks forward to the exploration of the more ancient outlying quarters of the original city. An Egyptian Pompeii underlies those soddened mounds, and it is tantalising to reflect that by the time they are dry enough to be worked the season during which excavation is practicable will already be drawing to a close.

In the temple area, and among the ruins of the great pylon, Mr. Petrie is now systematically examining every side of every fallen block; copying every inscription, however fragmentary, and separately photographing every object of interest. Some of these blocks have actually been worked three times, and bear portions of inscriptions of Rameses II., of Her-Hor, and of Sheshonk, the Shishak of the Bible. Among historical records of various epochs may be noted a curious tablet erected by a negro prince of the obscure period of the thirteenth dynasty, and the discovery of several fragments of a superb granite colossus of Rameses II., originally 50 feet in height, which has been barbarously cut up into building blocks by Osorkon II.



## NOTES AND COMMENTS.

THE programme of the Conference of Architects, which begins on May 5, is hardly sufficiently attractive to tempt visitors to come a long distance in the present weather. But the subjects mentioned are of a useful kind. There are to be six meetings. The first will be the annual meeting of the Institute. At the second the subject set down for consideration is "The duties, obligations, and mutual relations of architect and contractor, with reference to English and foreign practice." The third conference will consider "the tenure of land for building purposes." The "works of STREET, BURGESS, and VIOLETT-LE-DUC" will be discussed at the fourth meeting. For the fifth the subject is, "the French *diplôme d'architecte* and the German system of education." And at the last meeting a paper will be read on "English Architecture Thirty Years Hence." There will be visits to the Architectural Museum, the workshops of Messrs. CUBITT & Co., and to buildings, and a *conversazione* at the South Kensington Museum. A meeting of Associates will also be held.

THE Council of the National Smoke Abatement Institution some time ago protested against the leniency with which fines were inflicted in the metropolitan police-courts upon offenders who do not adopt the best practicable means for counteracting or preventing the smoke nuisance. According to the Act, a sum of not less than 40s. should be paid for the first offence, on a second conviction 10*l.*, and for each subsequent conviction the sum of double the amount of the penalty imposed for the preceding conviction. While this is the law, it is alleged that in some of the police-courts merely nominal fines, varying from half-a-crown to 10s., have been inflicted. The reply of the Home Secretary, to whom the protest had been addressed, was to send a copy of a return of fines inflicted under the Act in London between 1877 and 1881. In that period proceedings have been taken for improper construction in 607 cases, and convictions were obtained in 600. There were also 436 convictions for negligent use. In a very few cases fines of 20*l.* have been inflicted, but the average amount of fines for first offences is only 7*s.* 11*d.*, and for second and subsequent offences 10*s.* 1*d.* The figures show that the charges of the Institution have been well founded.

THE Ecclesiastical Commissioners are obliged to own that their funds are still seriously affected by the continuance of agricultural depression, and by the reduction of tithe averages. During the past year the grants towards the building of churches have not been liberal. Chancel repairs are debited with 7,783*l.* 19*s.* 11*d.*, the restoration of Southwell Collegiate Church with 2,307*l.*, and the residence houses for the minor canons of St. Paul's with 499*l.* 19*s.* 11*d.* But farm and other buildings required an outlay of 38,313*l.* The outlay on construction may be estimated from the architect's charges, which amount to 2,847*l.* 7*s.* 6*d.* The surveyor's charges have been 13,190*l.* 13*s.* During the year thirteen new churches have been substituted for old or existing parish churches, and nine churches have been formally approved for new parishes.

THE earthquake which was felt in Essex and in London on Tuesday recalls one in the last century which was described by HORACE WALPOLE. It is fortunate that in both cases the effects were not serious. In Essex there was naturally much consternation, although the damage that arose in some parts is trifling. In one house near Colchester the old china that stood on shelves was not disturbed, but in other places there was more evidence of the force of the earth tremor. In the village of Wyvenhoe the cottages have been unroofed and the church has been injured. At Colchester the spire of the Congregational Church was partly destroyed, and the old church of Langenhoe has been wrecked by the fall of the spire. According to an estimate which is likely to be exaggerated the damage in Colchester alone exceeds 10,000*l.* In a calamity of this kind science is powerless. It is impossible to foretell with precision when or where subterranean forces are likely to act upon the surface of the earth. For the same reason it is difficult to provide for contingencies by special construction. Houses which were supposed to be earthquake-proof have been tried in California and in Japan—but their success has not been encouraging.

The long delay in publishing papers read at the Institute of Architects has not been satisfactory to the writers. A new arrangement has been made, by which the papers read at the meetings between November and February are able to appear in type in April. The part just issued contains the papers on "Buildings for Applied Science Instruction," by Mr. ROBINS; "On English Monuments of the Sixteenth and Seventeenth Centuries," by Mr. TARVER; "On the Action of Lightning Strokes," by Colonel PARNELL; and "On the Education and Position of French Architects," by the secretary. The theory of Colonel PARNELL was not adopted by the scientists who heard his paper, but there will be less difference of opinion about the remaining contributions. The plans and descriptions of laboratories given by Mr. ROBINS will be found suggestive in practice. Mr. TARVER gives an interesting sketch of some interesting examples of English art, while Mr. WHITE follows Mr. MATTHEW ARNOLD in glorifying the French Academy. If English writers feel the disadvantage of the absence of a standard authority, it is no less true that English architecture also suffers both directly and indirectly from the same cause. In this country we are deprived of the "polite consideration, the charm of manner with which men of science and letters in France treat the subject of architecture." If Lord BEACONSFIELD lived in Paris he would have been restrained from offering the brutal suggestion of the hanging of an architect as the best means to ensure good building, and from foisting another man's *éloge* on the public as a specimen of his spontaneous eloquence.

THE process by which the beautiful lacquer of Japan is produced is not likely to remain much longer a mystery. The lacquer has been subjected to chemical analysis, and its constituents have been determined. The raw lacquer juice now used is really an emulsion containing a peculiar acid, to which the name urushic acid is given, the term having been derived from *urushi*, which is Japanese for lacquer. It is understood that the difference between good and bad lacquer consists mainly in the relative quantities of the acid and water which are present, inferior lacquer having more water than and less acid than the superior kind. One result of the chemical analysis will be to give more certainty to the process with the Japanese, and another will be a diminution of lacquer poisoning, which is supposed to arise from the gradual disappearance of the acid. It is believed that the materials now employed differ from those which were in use when the best examples of lacquer were produced.

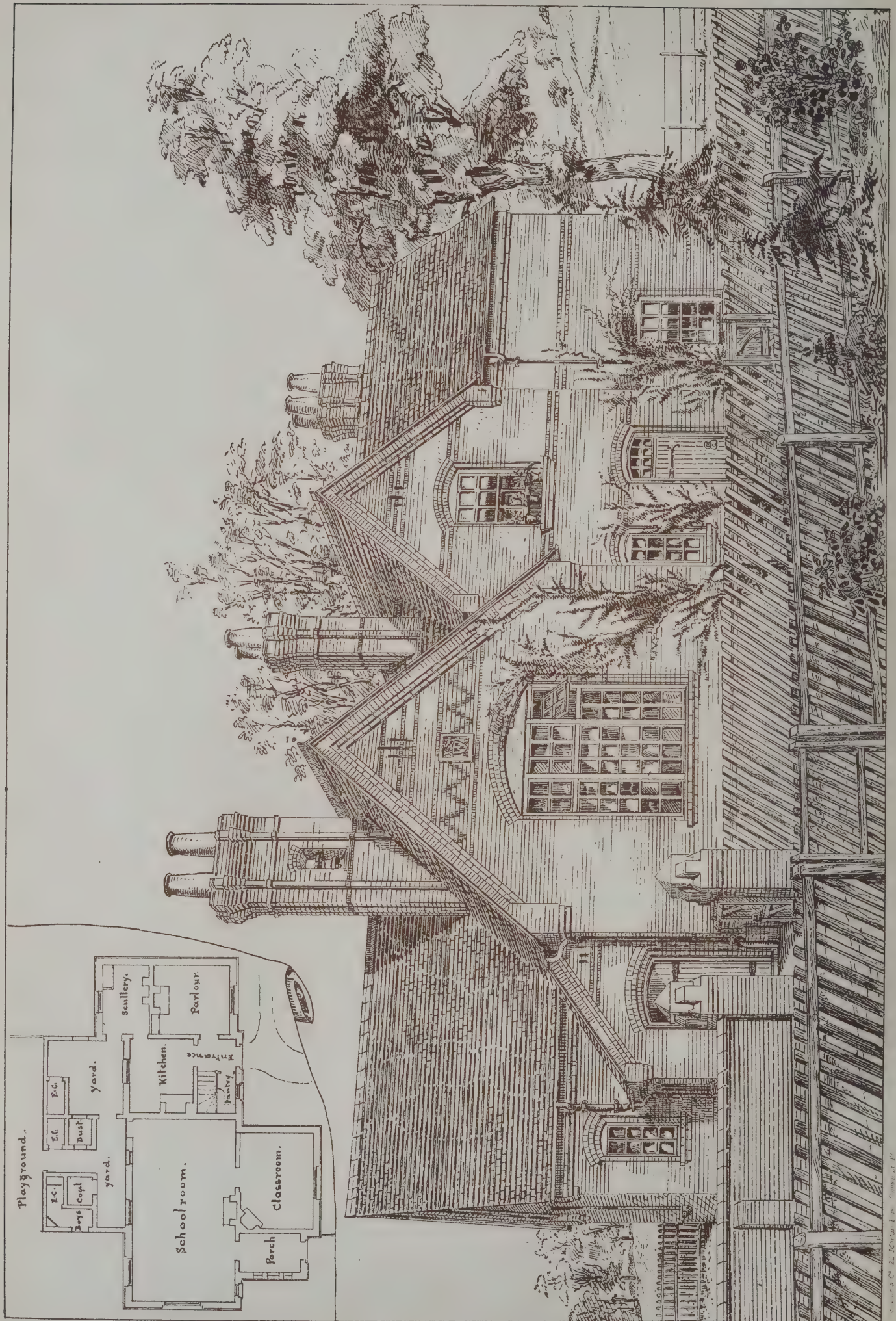
A DISCOVERY of great artistic and archaeological importance has just been made while excavating a cellar on the property of the Frères Maristes at Saint-Paul-Trois-Châteaux, a village in the Department of the Drôme. At a depth of only about five feet, the workmen laid bare a room dating from the Roman epoch, still in a very perfect state of preservation. The greatest treasure here found is a superb mosaic measuring 6 mètres 55 centimètres in length by 3 mètres 40 centimètres in breadth (about 22 feet by 11 feet 4 inches), the centre of which is taken up by a scene representing the marriage of HERCULES with HEBE, the goddess of youth. The hero is holding his club in the left hand, and stretching out the right, above the altar, to the goddess, who is clothed in a voluminous floating veil. The expression of the faces in this composition, which is surrounded by an ornamental scroll, is said to be wonderfully good. The rest of the pavement of the room is also richly ornamented; while the thresholds of the two doors consist of coloured mosaics.

Two Roman vases of fine form have been discovered by workmen while constructing a drain in Hyde Close, Winchester. The first is 4½ inches high, and its diameter 3 inches where it commences to decrease towards the neck. The second vase is larger, being 7 inches high and 5 inches in diameter in its greatest circumference. It sustained a slight injury from the pick, but it can easily be mended. It is of a light red colour, except at the neck and handles. These parts are stained a dark red colour, and the decoration of the body of the vase is in a light, almost white, clay, put on in slips and raised. It consists of two alternate groups of four vertical lines and eight pointed stars. The vase tapers to a small and elegant neck, with a small orifice and a pair of small corrugated handles, and the vessel would perhaps hold upwards of a pint. The swell of the vase is ornamented with handsome mouldings.









SCHOOL & TEACHERS HOUSE, ULLENHALL.  
W HAWLEY ILOYD ARCHITECTS







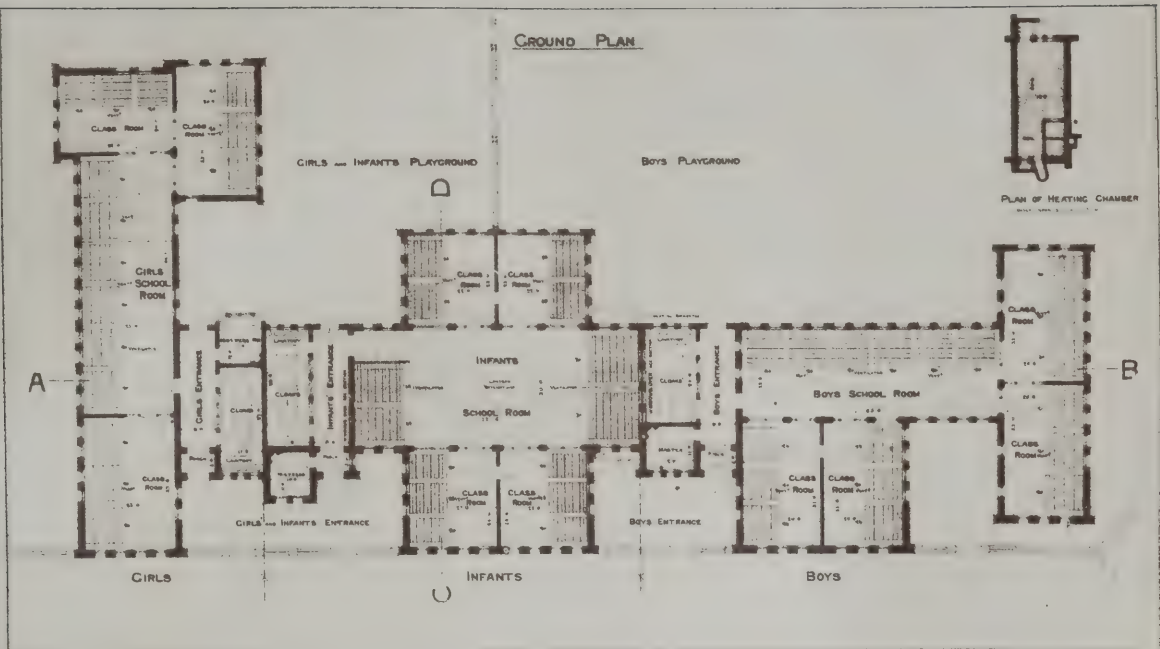


INK-PHOTO. SPRACUE & CO. LONDON

DESIGN FOR BOARD SCHOOL, M

WILLIAM DOUBLEDAY





J. Kay, James, Del

TARY ROAD, NORTHAMPTON.

ARCHITECT.







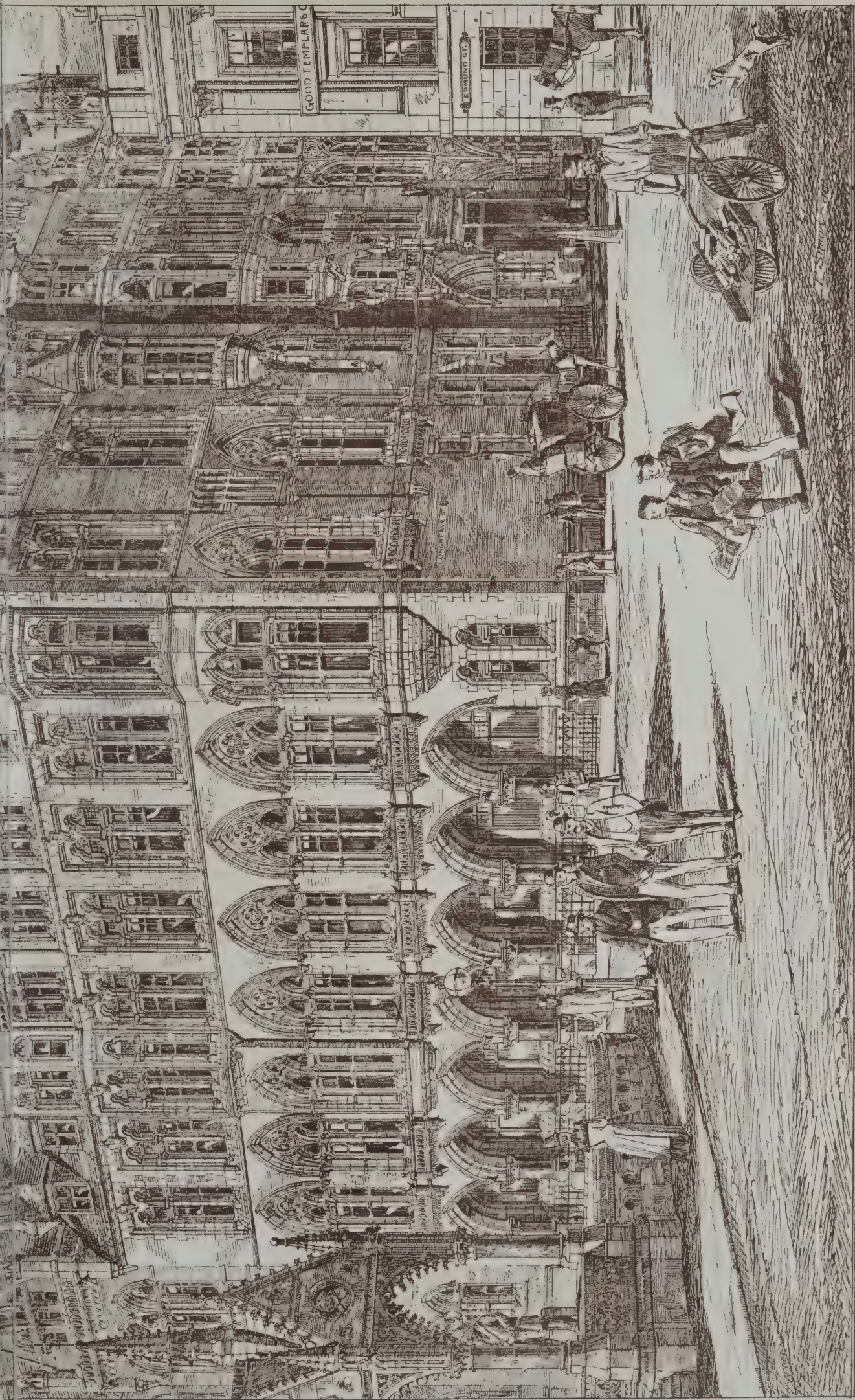




The Architect, April 26<sup>th</sup> 1884.







The Liberal Club & Birmingham & J.A. Cossins Architect & Co.









SEMI-DETACHED VILLAS, KINGS NORTON, WORCESTERSHIRE.  
FOR W.B. FEATHERSTONE ESQ  
OLIVER ESSEX, A.R.I.B.A. ARCHITECT.







## ILLUSTRATIONS.

THE BIRMINGHAM LIBERAL CLUB.

WE publish a view of the new club house now being erected by the Birmingham Liberal Club Buildings Company on an important site at the corner of Edmund Street and Congreve Street.

The buildings, which are in course of erection, will extend in Edmund Street only to the fourth bay, but when completed will immediately adjoin the Mason College, as shown by the illustration, and will be in close proximity to the town hall, council house, art gallery, free library, and Midland Institute. The principal entrance to the club is in Congreve Street, from which a vestibule leads to a large hall which, from its size and arrangement, the nature of the materials used, and its elaborate details, is expected to be an effective and original feature of the building. On this floor will be the reading-room, rooms for waiting, telephone and serving, &c., rooms. From the hall an oak staircase ascends to the first, second, and third floors. On the first will be the large dining saloon, bar, luncheon, and private dining-rooms and serving-room. A mezzanine floor will intervene between a part of the first and second floors, and will be occupied by manager's apartments and offices. The second floor will comprise large smoke and billiard-rooms with lavatories, and a large private dining-room. The third floor will be entirely set apart for bedrooms, bath and dressing-rooms for the members. The fourth floor will be entirely occupied by an unusually large and complete kitchen department; the bedrooms for the female servants will be over this. On the basement floor are a large, well-lighted lavatory for members and the bedrooms for men servants. A large hydraulic passenger lift will afford access between basement and third floor, and there will be provided dinner and other lifts. The heating of the building will be by a high-pressure small pipe water apparatus, and the ventilation will be effected by flues traversing the walls and communicating with a large foul-air chamber in the roof, from which a large shaft, heated with hot water and gas, will withdraw the foul air. It is proposed to use the electric light in all but the less important rooms.

The wall facings are of red bricks from Kingswinford, with red terra-cotta details from the works of Mr. J. C. EDWARDS, Ruabon; the granite is from the quarries of Messrs. WRIGHT & SON, Aberdeen. The builders are Messrs. W. & J. WEBB, of Birmingham; Mr. SIBLEY is the clerk of works, and the building is being erected from the designs and under the personal supervision of the architect, Mr. JETHRO A. COSSINS, Corporation Street, Birmingham.

SCHOOL AND TEACHER'S HOUSE, ULLENHALL.

THE village of Ullenhall is situate in the heart of that portion of Warwickshire known as the Forest of Arden. The school is for the accommodation of eighty children, and has been built, together with the teacher's house attached, and is maintained, at the cost of Mr. T. H. G. NEWTON, of Barrells Park, near Henley-in-Arden. The works have been carried out in the most substantial manner, at a cost of slightly under 5% per school-place provided, by Messrs. T. COLLINS & Co., of Tewkesbury, under the supervision of the architect, Mr. W. HAWLEY LLOYD, of 79 Colmore Row, Birmingham.

HOUSES, KING'S NORTON.

THIS illustration represents a pair of semi-detached houses in course of erection at King's Norton, Worcestershire, for Mr. W. B. FEATHERSTONE. Each house contains three reception-rooms, four bedrooms, and two attics, with the usual accessories. The exterior will be faced with best pressed red bricks, and relieved with ornamental moulded brickwork. The stone dressings will be Horsley Castle stone, and the roofs will be covered with brown tiles. The architect is Mr. OLIVER ESSEX, A.R.I.B.A., of 35 Paradise Street, Birmingham.

DESIGN FOR BOARD SCHOOL, MILITARY ROAD, NORTHAMPTON.

THIS design was submitted in the late competition under the motto "Straightforward." The plan was arranged to accommodate 350 boys, 300 girls, and 500 infants, the smallest classrooms being for 60, and the largest 68 or 70 pupils. The floor space allowed was 9 feet per child in the

infants' school, and 10 feet in the others. The least width of the schoolrooms is 22 feet, and of the classrooms 20 feet. The height to wall-plates is 16 feet, and to ceiling at collar of roof 25 feet, and to the infant school, which is lofty, so as to get the full advantage of the window light in gables over galleries, 27 feet.

It was proposed to construct the walls of best pressed red brick, with red stone or terra-cotta dressings, and the floors of solid wood blocks on concrete. ELLISON'S patent inlet bricks and BOYLE'S outlets for extracting vitiated air would be used. The cost of the building, according to builders' estimates, would not exceed 9,290*l.* The design is by Mr. WILLIAM DOUBLEDAY, architect, Birmingham.

## THE ARCHITECTURAL ASSOCIATION.

THE members of the Architectural Association held their annual soirée on Friday evening, the 18th inst., at the Westminster Town Hall. A large gathering of members assembled for the occasion, including many past presidents and senior members. The capacity for hard work is a well-known characteristic of the Association, which, as an educational organisation, is something altogether unique not in the kingdom alone, but, it may be said, in the world. That those who apply themselves in earnest to work and study are among the foremost to know how to enjoy themselves in season need scarcely be observed. Nor is it surprising that, with so good a programme as was provided, a pleasant evening was spent by all, although the hall itself is a gloomy one. The proceedings of the evening were inaugurated with preliminary business, as is usual at the ordinary meetings, Mr. Cole A. Adams, the president, occupying the chair, and supported by the honorary secretaries, Mr. Atkin Berry and Mr. H. D. Appleton. This routine business was humorously adapted for the occasion, and not to be taken *au grand sérieux*. The minutes having been read, certain eminent members of the profession and notabilities outside the profession were nominated for election as members of the Association. Sir Edmund Beckett, for instance, was nominated for membership on occasion of the completion of the west front of St. Albans. Mr. Seddon and Mr. E. W. Godwin, proposed by Mr. Aston Webb and seconded by Mr. Ingress Bell, were nominated on occasion of their letters to the *Times*. This business was duly transacted, and served as the introduction of the chief item of the evening's entertainment, in the shape of a burlesque, composed within the ranks of the Association, the authors of the play being, so the programme stated, unknown, and wishing "to remain so." The characters were admirably sustained by various members, and the scenery was certainly "kept strictly subservient to the acting," for—well, there was none. The play of course turned on matters architectural in general, and on competitions, notably the Admiralty and War Office competitions, in particular. The architectural world is fairly well acquainted with the vagaries attendant on competitions, so the present competition seasonably suggested the occasion for illustrating the chances of mischances run by competitors in these professional games of hazard. Without giving any description of the course of the play, a word by way of sketching one of its leading ideas may be allowed. Mactout, a London architect; Mrs. Mactout, his amiable consort; and Bunkum, an American architect, "great at competitions," were the prominent characters; as also three Witches, or Friends in Council. Mactout is a would-be competitor in the Admiralty competition, though it does not appear as if he had put pencil to paper, far less got plans ready. He evidently entertained the gravest doubts as to his powers of winning a place in the contest, and, if anything, appeared pretty confident that his chances were *nil*, should no lucky chapter of accidents come to his aid. The aid comes, of course, for while strolling on Hampstead Heath, engaged in building villas, detached and semi-detached—*en Espagne*—the three witches appear on the scene, and in an evil—good or evil?—hour Mactout crosses their palms with small silver coin of the realm, and learns in return that Bunkum has just arrived on the Heath from New York, with plans under his arm destined to carry off the competition. Mactout's resolve is instantaneous, and he carries off the winner, that is to say, the predicted winner, plans and all, to his own house, there to give him hospitality for the night. The evening's entertainment, however, proved rather too strong for Bunkum's head, or perhaps his long journey had tired him, for, to say the least of it, Bunkum got so sleepy after dinner that he fell on his back, fortunately on a chair or two, with his feet pointing heavenwards, and his legs at right angles with his body, after the supposed most orthodox American fashion, and straightway went off in a profound stupor. While thus sleeping the sleep of the just, Bunkum is carried off to bed by Mr. and Mrs. Mactout—not, however, before they had subtracted the coveted plans from under his arm, where hitherto they had been jealously guarded by Bunkum. The motto on the plans is speedily erased, and that of Mactout substituted, and the



plans sent off instantly to the St. Stephen's Porch at the Houses of Parliament. The time, the study, the labour expended by Mactout to win the competition had unluckily been expended in vain, on account of the small oversight that, having changed the motto on the plans, he had forgotten to change the letter accompanying the plans which Bunkum had written. Bunkum of course is victorious: he wins the competition, but is so thoroughly alarmed by Mactout, who threatens to write a letter to the *Times* to say that he is utterly incompetent to carry out so large an undertaking and is quite unpractised in construction, &c., that he makes Mactout his friend by consenting to go halves with him. Among other incidents which were represented in the course of the play, the styles, Egyptian, Greek, Roman, Moorish, Italian, Gothic, and Queen Anne, were personated by seven gentlemen, and, when properly grouped together, did duty for the style of the future, illustrative, no doubt, of "a wise eclecticism resulting in the survival of the fittest." At the conclusion of the burlesque an old friend of the Association made his way to the stage, not unlike a district surveyor about to condemn the amalgamated styles as an unsound structure, but instead of this he advised the audience to take the opportunity and study it, that is, if they thought that it represented the architecture of the future. This was by the way only, and he asked the audience to bestow a hearty vote of thanks on the members who had so successfully catered for their amusement that evening, and the vote was carried by acclamation.

### ART IN SCHOOLS.

THE prizes gained by the students of the Stoke and Fenton School of Art were distributed on Saturday last by Mr. Oscar Wilde, who, in his address, said that they were told by Mr. Ruskin that we lived in an ugly age, and that art suffered from smoky chimneys, polluted streams, railways, and commerce; but he (Mr. Wilde) entirely disagreed with him. The true artist did not wait until life became picturesque for others. He took care to see life under picturesque conditions always. He would not desire that external life should be permanently beautiful, and he would know that under certain conditions of light and shade everything would look beautiful. Once in every twenty-four hours everything became beautiful. Mr. Ruskin had said many dreadful things about the iniquity of smoke, and he (the speaker) was not going to praise it on sanitary grounds. He would only remind them of the beauty Turner saw in those very scenes which Mr. Ruskin so often ran down. There was no better answer to those who complained of commerce spoiling art than to turn to Turner's pictures. He referred to the liking for prettiness prevalent among many modern artists, and after speaking of the extremely hard outline of modern English painting, in which we might learn something from the Japanese, and describing the way in which Japanese children were taught to draw, he said all the world was the property of the artist, and under certain conditions would give him beautiful subjects; and it was to the visible world he should go, and not to literature. We had suffered for the fatal alliance of painting with poetry. We had seen painters pass their lives in illustrating poetry and history, becoming merely adjuncts of literary men. There was plenty of scope for the artist without having recourse to literature for his subjects. He considered it would be better to teach children handicrafts instead of mere book learning in our elementary schools. They could never forget the dreary, weary hours they passed in childhood with their books—books good enough in their way, but not good enough in our way. They learned a good deal at school, and a great deal more in the open air. Instead of teaching the latitude and longitude of countries no one wanted to go to—which was what people called geography; or the lives of kings of the Saxon Heptarchy, which was merely the lives of people who never lived at all, they should teach children handicrafts, which would enable them to apply the arts of decoration to their homes, and make them pleasanter places to live in. Every child had a sense of imagination and creation about him that our modern books hardly seemed to touch at all. We ought to make our schools far livelier than they were. The school should be one of the most beautiful places in every town and village—so beautiful that the punishment for an idle little fellow should be keeping him away from school. What was wanted was a constant succession of beautiful things in the school, so that the children should grow up with lively surroundings, and grow to like the beautiful and good. The moment the nation ceased to honour handicraft the end would come to all idea of beauty in its productions, and those who were anxious to bring up their sons as clerks or members of the liberal professions should remember that handicraft was really a noble and splendid profession.

Mr. Woodall, M.P., in proposing a vote of thanks to Mr. Wilde, said if he might presume to take exception to anything in the address they had just heard, it would be to the doctrine laid down that there should be no connection between painting and poetry. He recalled the lines of one who must have been singularly devoid of poetry, who wrote, "A primrose by the river's brim, a yellow primrose was to him, and it was nothing more." Whether they regarded the primrose as the symbol of the æsthetic school with

which Mr. Wilde had been identified, or as the emblem of a great political party, their meeting that day was much brighter for the many primroses they had the pleasure of seeing in that room. Mr. Wilde had referred very forcibly to the duty of making life—especially in relation to their poorer children—beautiful, and he trusted that, although Mr. Wilde might be regarded as the apostle of an idealistic school, practical people would not fail, as far as in them lay, to carry out his injunction. A society had been formed to accomplish this purpose by means of pictures and other works of art, and they were much indebted to Mr. Wilde for having so authoritatively enforced the duty and advantage of making our elementary schools more attractive and practical. He (Mr. Woodall) had had opportunities during the last few years of seeing a good deal of elementary school work in various countries, and there was nothing so impressive as the tendency of foreign Governments to teach children practical handicrafts, and to familiarise them with the use of tools—in many cases going far beyond that. It was satisfactory that the experiment had been put in operation by several School Boards in this country with a success which was particularly gratifying.

### STRATFORD-ON-AVON CHURCH.

THE Society for the Preservation of Ancient Buildings have so often remonstrated with foreigners about projected restorations and alterations of buildings, it is not surprising to find a Frenchman protesting against the works which are proposed to be carried out in the parish church of Stratford-on-Avon. M. Jusserand is an admirer of Shakespeare; and he is, moreover, one of the vice-presidents of the New Shakespeare Society. He has, therefore, some claim to attention. M. Jusserand says that it was with much surprise he heard, during a recent visit, of the restoration; and from the accounts he received, he believes that what is contemplated is one of those thorough works of which there are too many examples on the Continent and in England. According to M. Jusserand, the vicar considers that the church is at present too small, and a more capacious nave is required for the development of the ceremonies; but there must be some error in the statement, and it is possible the critic is thinking of foreign ritual, and of what he has seen in French churches. The Stratford-on-Avon church, says M. Jusserand, has, in addition to its associations, an artistic value that is real. It is a very good specimen of the churches which were found in small towns in the fourteenth and fifteenth centuries. As so many of them have been destroyed or restored, the survivors are the more deserving of respect. The monuments which are to be seen on the walls of the church, and which record the names of numbers of the inhabitants of the town, appear precious in the eyes of M. Jusserand. Through them the church becomes the Westminster Abbey of Stratford-on-Avon, and he recalls the fact that Shakespeare selected by preference the provincial temple as the place where he might repose in the midst of his kindred, and without more pride, pomp, or circumstance than was befitting a wealthy burgess who was the owner of New Place. If the poet could revisit the glimpses of the moon, he would still find something familiar in the appearance of the church. The number of the monuments has increased, but they are inscribed with the names of townsmen, and it may be assumed that Shakespeare would plead for their preservation. At present the memorials are doomed to removal, as new walls are to be constructed on new foundations. M. Jusserand is of opinion that the fabric of the church is in good condition, and will so remain provided that some care is taken for its maintenance, and that the upper part is kept free from moss and creeping plants.

### ELY CATHEDRAL.

THE Commissioners who were appointed to inquire into the condition of the cathedral churches of England and Wales have reported on Ely Cathedral. This cathedral is on what is called the new foundation, having been constituted by King Henry VIII. in 1541 on the dissolution of the ancient Benedictine monastery founded by Queen Etheldreda A.D. 673. But a bishopric was created at Ely in 1108, the monastery being preserved, and the bishop being also the abbot. It is calculated that the gross income of the Dean and Chapter of Ely is 14,653*l.*, and the net income about 13,200*l.* The treasurer, however, says the net income is under 13,000*l.* Out of that sum, 7,440*l.* is paid to the dean and canons, and 3,098*l.* to precentors, lay clerks, &c. In addition, 900*l.* goes for subscriptions, allowance to curates, donations, &c. What is left amounts to 2,000*l.*, and is expended in the following way:—Maintenance of cathedral worship and repairs, 1,250*l.*; maintenance of precincts, labour, insurance, &c., 550*l.*; and maintenance of houses for cathedral officers, 200*l.* The sum expended on the fabric of the cathedral is plainly of small amount. The dean and canons have their several residentiary houses within the precincts; so have also the master of the schools, two of the minor canons, the teacher of the choristers, and the vergers. The dean



and canons keep their own houses in repair, with some aid from their corporate funds, as appointed by statute. The houses of the minor canons and other officials are repaired wholly by the chapter. The maintenance of the master's house and dormitories, together with the schoolrooms, which are situate in the great gate-tower of the college, comes from the school endowment fund. An ancient chapel within the precincts, recently restored, is lent for the purposes of the school, but kept up by the chapter. There is also a muniment-room, fireproof, and two cottages for the use of the college retainers, and an ancient store-barn of large dimensions which has been converted into stables for the use of the chapter. The condition of longer residence now required of the dean and canons have necessitated considerable expenditure of late years in the improvement and enlargement of several of the houses. Four of the present canons have found it necessary to obtain loans from Queen Anne's Bounty by a mortgage on the income of their stalls, to which payments, as regards repairs, the chapter contribute according to the requirements of the statutes. The chapter-house of the monastery is said to have been destroyed at the dissolution. The chapter of the college used formerly to meet in one of the vestries, but for many years past they have made use of the dining-room and other apartments of the deanery for capitular purposes, and furnish and repair them out of the common fund. The ancient barn above mentioned might perhaps be made available for public objects connected with the church—if, for instance, it were converted into a chapter-house and library, and used occasionally for diocesan meetings; but the outlay required would be very considerable.

The following is the arrangement proposed by the Commissioners for the conservation of the cathedral and other buildings belonging to the see:—The treasurer, under the advice and direction of the dean, is to provide for the external and internal repairs of the cathedral and of everything appertaining to the church and choir, and of all other houses, buildings, walls, fences, and grounds within the precincts of the cathedral (except those appropriated to the dean and residentiary canons and to the cathedral grammar school); but no order is to be given for any important work without the consent of the dean and chapter. The treasurer is also to take notice of the houses, buildings, and erections appropriated to the dean and residentiary canons, which by direction of the dean and chapter he shall require them severally to insure adequately against fire, and if any repairs of the same shall be required, and if being warned thereof by the treasurer, the person liable to the repair thereof shall not repair the same, the treasurer is to provide for the repair, and charge the same to the person liable; or in regard to the house and buildings appropriated to the treasurer himself, if being warned by the dean he shall not repair them, the dean shall order the repair and charge the same to the treasurer, provided that the dean and residentiary canons shall, as allowed by the ancient statutes, be assisted with the requisite materials for such repairs by the treasurer at the common charge, or, if more convenient in his judgment, that one-third of their reasonable expenses be so allowed them.

### THE MUNICIPAL OFFICES, LEEDS.

THE new Municipal Offices and Free Library in Leeds, which have been designed by Mr. Corson, were opened on the 17th inst. by Alderman Woodhouse, mayor. The cost has been over 100,000*l.* The library includes a reading-room, 80 feet long by 40 feet wide, divided into a broad nave and aisles by six arches upon pillars of polished granite. The walls are tiled throughout, and on them are medallion busts of Shakespeare, Homer, Dante, Milton, Goethe, Scott, and others, the work of Mr. B. Creswick. The general character of the design and ornamentation of this room is Romanesque. On the next floor is the lending library, which will contain forty thousand volumes. Here terra-cotta takes the place of granite, the effect being different in character and much more subdued than that of the room below. Above this is the reference library, which will contain a hundred thousand volumes.

At the banquet which followed the opening Alderman Tatham proposed the health of "The architect of the new building," and paid a high tribute to his abilities as an architect.

Mr. Corson, in replying, remarked that if he were to be guided by the adjectives which had been used respecting the new municipal buildings, it would seem that the work had not altogether been a failure. The money spent upon them had been well laid out, and full value had been obtained for the expenditure. He, however, intended to ask the committee to allow him to complete a few things which were scarcely to his taste. For instance, the hot water coils in some of the rooms required to be made something rather more attractive to the eye than they were in themselves. Two statues were also wanted for the front and one for the centre of the building. Possibly some gentleman of artistic proclivities and a large purse would present such for this particular purpose. He was sorry that the late chairman of the committee had not been able to be present at that day's proceedings. He desired to thank those who had assisted him in the work during

the last five years, including Mr. Watson and Mr. Osborne (clerk of works), who filled a similar place in connection with the Manchester Town Hall. A good deal of labour had been necessary, as shown by the fact that 1,060 drawings in connection with the buildings had been prepared.

### THE NEW UNIVERSITY BUILDINGS, EDINBURGH.

THE Principal and Professors of the Medical Faculty invited over six hundred guests to a luncheon in the Anatomical Museum of the University New Buildings.

Dr. Billings, the representative of the University of Philadelphia and of the John Hopkins University, proposed the toast of "The Architect" of the buildings. He said:—I am very glad to have the opportunity of proposing the toast which is set down opposite my name, for I have had the opportunity of examining the buildings which have been constructed for the work of the medical departments of many of the great universities in Europe and of our own schools, and in this country also. The time has long gone by when the single little amphitheatre, such as some of you may remember to have seen in the old University of Bologna, with its two or three professors, was sufficient for the teaching of medicine. We have now learned that, in order to teach men to swim, it is necessary to put them into the water, and the whole tendency of modern education is to provide practical facilities—laboratory facilities. The old amphitheatre, while not done away with, is not now the sole method of instruction. The combination of all the methods for the various branches which are now considered necessary for a medical education—the proper combination of the eight, nine, or ten chairs, with means for theoretical instruction on the one hand, and practical instruction on the other—is not an easy matter even for a small school; but the difficulty may be imagined when it is necessary to provide, as we have heard to-day, for 1,500 students. After a careful examination of this building, I am prepared to say that these difficulties have been largely overcome, and that this is to-day, taking it altogether, the best planned and best arranged medical school of instruction in the world. I think, therefore, I need not use any special arguments or pleas to induce you to drink the toast which I shall propose to the man who has combined with his own skill all the information derived from all the various sources, to arrive at this perfect and harmonious result; for the architect must have exercised great judgment and performed a vast amount of mental work, besides assimilating the information which he has obtained elsewhere. The single scraps of information he may have obtained from the professors would not have created a building such as this, no more than a few isolated facts would create a science. I therefore ask you to join me in drinking to the health of the architect of the buildings, Mr. Rowand Anderson.

Mr. R. Rowand Anderson, who was received with loud applause, said in reply:—I esteem it no small honour to be called upon to acknowledge this toast, as having been selected to be the architect to design and to superintend the erection of the important public building, the inauguration of which is the occasion of this great meeting to-day. And I ought to feel more than gratified with your verdict, and with the graceful acknowledgment of the manner in which I have accomplished my task, which has been pronounced by Dr. Billings, whose distinguished position in the medical profession, as the head of a great department of State, and whose knowledge of all the great buildings of the world of this description entitle him to speak with the voice of authority. To combine in one building the nine great departments of this school of medicine, with all the varied and different requirements, was a task of some difficulty. After studying the requirements of the professors, and after visiting the best buildings of this kind that eight years ago existed in Europe, I realised the great change that was taking place in the teaching of medicine and surgery; and I saw that if the school in Edinburgh was to maintain its position I must produce a building in which the great side of medical teaching—the practical side—could be carried on under the most favourable conditions, and that no mere pedantic rule of architecture or questions of style should so limit me as to mar the vital object of producing a building thoroughly adapted to its purposes. If I have succeeded—if I have even partly succeeded—for all the work of the best of men has those imperfections which are the steps towards that greater degree of perfection to which we are striving to attain—I shall always feel pride and satisfaction that I have been privileged to contribute to the maintenance of the fame of this great school, and to enable it, not only to sustain the traditions of its past history, but to hold the position which it has so nobly won. And when this building is completed by the addition of the great hall, I trust it will be a building not unworthy of our own romantic town. I have been frequently asked why I have adopted that phase of architecture which you see here. Obviously I could not have made use of Greek architecture, and to have adopted Palladian art would



have been to sacrifice the interior to the exterior. I have not adopted Mediaeval art because an architect cannot ignore the spirit and tendency of his time; but I have made use of that phase of art which arose in Italy during the second half of the fifteenth century, when the great minds of that country began to burst the bonds of dogma and ecclesiastical authority, and were determined to inquire into the nature of all things, and which, I believe, will be the meeting ground where those gifts of the ancient to the modern artists—viz., those principles of construction evolved and perfected during the Middle Ages, which so long as we build in stone and lime must be used, and that love of beauty and humanity for its own sake so characteristic of Classic art—will mingle and lead to the production of a phase of art that will respond to and be more impressive of the thought and life of the modern world than anything we have yet seen. To the Professors, to the Building Committee, I owe my most grateful thanks for that confidence they have always placed in me, dealing with all questions—practical or artistic—that have arisen. Of all the contractors that have been engaged in the work, I am bound to say that they have done their duty faithfully; and I have also to acknowledge the services of Mr. Allan Clark, the clerk of works, who has been employed here throughout; and whose knowledge of work, and whose frankness and courtesy have contributed very largely to the realisation of this building. And to this great and illustrious company I return my most grateful acknowledgment of the hearty manner in which they have responded to this toast.

### THE NATIONAL GALLERY.

THE Report of the Director of the National Gallery for 1883 has been published. Mr. Burton informs the Treasury that during the year sixteen pictures have been purchased. Of these, the most important are Mantegna's *Samson and Delilah*, which was bought at the sale of the Blenheim Collection for 2,362*l.* 10*s.*; the *Procession to Calvary*, by Ridolfi del Ghirlandajo, purchased in Florence for 1,200*l.*; a *Portrait of a Young Man*, by Antonello da Messina, which cost in Genoa 1,040*l.*; and a *Portrait of a Boy*, by Isaac van Ostade, for which 840*l.* was paid.

The bequests of the year have been a *Portrait of a Lady*, by Sir Henry Raeburn, R.A.; a *Young Girl carrying a Lamb*, by Jean Baptiste Greuze; a *Family Group*, by William Hogarth; *The August Moon*, by Cecil Lawson, presented by Mrs. Cecil Lawson; *Christ at the Column*, by Velasquez, presented by Sir John Savile Lumley, K.C.B.; and a plaster cast from a bust of Mantegna, by Sperandio, in the Mantegna Chapel, basilica of St. Andrew, at Mantua; lastly, is a palette, formerly belonging to the late J. M. W. Turner, R.A., with an autograph note attached.

In conformity with the provisions of the National Gallery Loan Act of 1883, a certain number of pictures belonging to the British school have been selected for loan to provincial and other institutions. The wall-space thus gained has enabled the Director to place in Room XVI. many recently-acquired examples of the foreign schools, but several still remain hung on screens in other parts of the Gallery. The pictures have been lent to the National Portrait Gallery, the National Gallery of Ireland, the Walker Art Gallery, Liverpool, the Manchester Art Gallery, and to the Corporations of Sheffield, Nottingham, Oldham, Dundee, Leicester, Stockport, Warrington, Stoke-on-Trent, and Glasgow. In addition, about forty oil paintings by Turner have been removed from the walls of the National Gallery, and will be distributed between the several institutions above mentioned as soon as the allotment has been effected. Many of these loan pictures require to be cleaned, and some to be re-lined, before they can be sent away. This will occasion some delay, and involve an expense which cannot be met out of the ordinary annual vote for this department. It is hoped, therefore, that a special provision will be made for this purpose by Her Majesty's Government, as soon as its amount can be ascertained.

The total number of pictures now contained in the public rooms of the Gallery is about 940, exclusive of water-colour drawings. The death of the Duke of Ripalda has delayed for a while the removal of the *Colonna Raphael*, which the Duke, shortly before his decease, had promised to effect. The trustees now only await a formal application, properly authenticated, from the late owner's executors, on receipt of which it will be delivered into their custody.

The glass screens, so long desired for the prevention of draughts in the Gallery, have at length been erected in the entrance hall, to the great advantage of the students and the public, and with a beneficial result to those pictures which, being hung in rooms near the staircase, had previously been exposed to constant variations of temperature. But the evils thus mitigated will not be entirely removed until the present inconveniently planned hall and staircases have been entirely remodelled, an improvement which the trustees are glad to find is included among the alterations proposed for the building by Her Majesty's Office of Works.

Recent additions to the contents of the gallery, acquired by purchase and bequest, have rendered it impossible to postpone any

longer the enlargement of a building in which the available wall-space has long been insufficient for the proper display of many important pictures. Accordingly, in the early part of last Session Her Majesty's Government obtained from Parliament a grant of 5,000*l.*, as a first instalment towards the cost of new rooms to be erected at the rear of the old Gallery, and in extension of the new buildings designed by the late Mr. Edward Barry, R.A. The proposed additions will somewhat encroach on the space hitherto occupied by St. George's Barracks. This has involved negotiations with the War Office, and the Office of Woods and Forests, which have unfortunately delayed the commencement of the works, and up to the present time no portion of the building contract has been undertaken; but it is hoped that after the settlement of necessary preliminaries no time will be lost in carrying out a scheme of such essential importance.

As nearly as can be calculated, the National Gallery was visited by 849,604 persons on the public days during the year 1883, showing a daily average attendance on such days (207 in number) of 4,104. These numbers must, however, be only regarded as approximate, no accurate means of checking them being in use.

On students' days (Thursdays and Fridays), when the number of visitors entering by payment is registered by a turnstile, 36,572 persons were admitted between January 1 and December 31, 1883, the admission fees (at sixpence each) amounting to 914*l.* 6*s.*, as compared with 856*l.* 10*s.* received in 1882.

The total number of students attending the Gallery on Thursdays and Fridays throughout the year 1883 was 21,192. Independently of partial studies, 778 oil-colour copies of pictures have been made, viz., 465 from the works of 70 old masters, and 313 from the works of 43 modern painters. The picture that was most often copied was Greuze's *Girl with an Apple*, and among English works Reynolds's *Infant Samuel*.

### PROTECTION IN THEATRES AGAINST FIRE.\*

THE safety of the public must be studied by the enforcement of certain precautions that are indispensable. To describe these I propose, first, taking the auditorium, and afterwards the stage.

The seats in the auditorium should be fixed, every seat allowing at least two and a half square feet of room for the occupant, and be so arranged as, while tending to prevent a "block," allow a free passage to the exit door. All the seats in a theatre should be licensed, and it should be an act against law for a manager to allow or permit more people in his theatre than he has licensed seats to accommodate. All staircases should be constructed with hand-rails on either side, and where any turn of the passage may lead any one to doubt the direct way out, the word "Exit," with a hand pointing in that direction, should appear prominently. All exit doors should be distinctly labelled "Exit," and every such door should be opened nightly for egress. All exit gangways should be clear of any obstruction, and for outer exit doors, which should open outwards, carpet curtains should be used in place of doors, to prevent draught, &c. Every separate part of the building, such as pit, dress circle, gallery, &c., should have a separate and direct exit, no other exit leading into it at any junction whatever. Excepting the case of private boxes, there should be no movable seats capable of being overturned in any part of the theatre. Cloak rooms, refreshment rooms, and other public conveniences, should be situated at the farthest point from the exit door, thus leaving the exits clear of unnecessary traffic. No greater number of people should be contained in any part of the "house" than, by calculation of width of exit, &c., would allow of a clearance being effected under three minutes. Special attention should be directed to such parts of the house as are highest from the basement. Smoke ascends, and suffocation can be effected by causing insensibility in the space of one minute.

An outlet for smoke in the roof is desirable, although it may assist the spread of fire,† life being of greater value than property. All gas-pipes, &c., should be of iron, no metal piping being used. If the lighting power be by gas, it should be supplied from separate meters and mains, one for the auditorium, the other for the stage; while supplemental means, such as oil lamps, should provide against the contingency of total darkness. Where lighting is effected by means of electricity, the wires should be laid under responsible authority.

Lastly, the adoption of fire regulations and fire drill, as explained, should be enforced, and the building subjected to inspection after being closed, by constituted authority, that would insure proper vigilance being exercised against an outbreak of fire.

The stage, a combination of wood, canvas, arrangements for lighting on an extensive scale, and properties generally of a naturally inflammable character, rendered still more so by the great heat nightly engendered, may be considered the part of the house requiring the greatest protection. The danger attending the

\* From a paper by Captain A. W. C. Shean, Consulting Fire Brigade Engineer, published in the Journal of the Society of Arts.

† Such outlet being made to act automatically by the action of heat.



lighting of a stage, generally effected by the use of coal-gas, must be considered.

The frequent shifting of scenes necessitates a constant rearrangement of gas-pipes having joints of flexible india-rubber, the insecurity of any one of which, causing an escape of gas, being likely to lead to danger of the greatest magnitude. It is most desirable that lights, as much as possible, should be fixed and powerfully reflected—use being made of everything available, floor and backs of scenes—to increase the power of light, which would be advantageous from the point of view of safety from fire as well as economy.

Flexible gas-joints should be under constant supervision, all pipes for the conveyance of gas throughout the "house" being of iron. No workshops of any description or "stores" should be attached to or form part of a theatre. Where scene-painting is done inside a theatre it should be executed under strict rules, provision being made, amongst other important items, against smoking. It is absolutely necessary that every licensed building should be placed under strict rules and regulations, providing for careful, vigilant, and ceaseless watching.

Stage properties generally may be rendered non-combustible by the use of chemicals, such use being approved at the Society of Arts meeting on May 31, 1883, when the following resolution, proposed by Sir Frederick Abel and seconded by myself, was carried unanimously:—

"That it is important that attention should be given by managers of theatres to the known methods for reducing the inflammability of structural or decorative materials, and that it is desirable that more use should be made of such methods."

Practically the recommendation is not appreciated, and little or no use is made of a valuable means of protection easily and inexpensively applied.

Water, and that of a most insufficient and scanty supply, is the only element upon which any reliance can be placed for the extinction of fire in theatres.

The pressure in the Strand district, where many of London theatres are situated together, I tested in February 1882, and found to be under 45 lbs. on the square inch. The pressure varies from 30 lbs. to 50 lbs., the exception being a pressure of 55 lbs. This highest pressure is insufficient to reach to the roofs of many of our theatres, and there is only one remedy. Each theatre should be provided on the stage with a copper tank, containing about 100 gallons of water, with four deliveries, one for each side of the stage—"floor" and "flies." By means of an air-pump, air could be pumped into the cylinder, till, by gauge, a pressure could be shown of at least 150 lbs. on the square inch—and the gauge would continue to show the existence of the pressure or its decrease.

Theatre fires have, in almost every known instance, burnt themselves out. Density of volume or force of contact will alone stop a fire in a theatre, by, so to speak, suffocating it. For this reason I question the utility of a high proscenium wall as a means of stopping or preventing a "burn out" in event of fire. From practical experience I should assert that unless fire in a theatre can be subdued locally, *i.e.*, that an outbreak can be checked within a reasonable limit by local appliances then and there at command, all hope of saving any part of the building might be deemed futile. The delivery of water from such a reservoir and with such pressure as I have named, through branches one-sixteenth of an inch in diameter, would prove an extinguishing agent of sufficient power for all ordinary purposes. Little discretion has been used, in numerous instances, in placing the hydrants and appliances in theatres for fire extinction. Exit gangways and similar places would, in event of fire, be crowded with a surging and excited crowd—and in these places are the appliances, in many instances, fixed. The hose is coiled, the branch and different parts of the gear laid apart "on view," the practical use of the appliances being seemingly ignored. On the occasion of accident, such parts of the appliances for fire extinction have to be joined together, and the hose rolled out, and thus the most valuable time, namely, that immediately following an outbreak of fire, would be wasted in completing work that should be kept perfect, and the appliances ready for instant use.

That part of the house used by the orchestra, if connected direct with the outside of the building by a subway, would be the most convenient for placing hydrants, &c., as the appliances, while being used, would be free from the turmoil of a crowd, and handy for use by the servants of the theatre, whose knowledge of a clear subway to the street would enable the appliances being advantageously worked for as long a time as possible in the direction of any part of the house. Supplementary aid and assistance could also, by means of the subway, gain easy access from outside the building, while the audience would be permitted to avail themselves of the ordinary exits, unencumbered with fire-brigade appliances that, otherwise being got ready and used in their midst, could only tend to add to confusion, loss of time, and in every way prove highly dangerous and thoroughly inconvenient. In the event of fire occurring on the stage of a theatre, it is usual to cut away the burning portion. For additional safety it would be as well to have ready for use "trays" of close wire gauze, that might

catch the material alight, and so tend to prevent an extension of the fire.

Buildings to be erected and intended for theatres or places of public amusement should have all staircases constructed of concrete, with banisters of iron, and have a separate and distinct water service for fire extinction. As danger is as likely to be apprehended from smoke as from fire, special attention should be directed to the gallery and upper parts of the building. At only one theatre, namely, the Savoy, has this been studied in the construction of the theatre, the gradient of the basement being utilised to afford equal advantages to the upper as to the lower parts of the house.

A full and complete official investigation should follow the occurrence of any and every accident by fire in theatres, a report of the occurrence of which should be made compulsory to the duly appointed authority, the establishment of which, by the Government of the country, is a most necessary and pressing subject of home legislation. The entire English press has acknowledged the necessity for some decided action being taken, in the public interest, in the prevention of fires in theatres, and it is to be sincerely hoped the experiences of the past may not need repetition in order to provide reasonable security in the future.

I feel it necessary to draw attention to the manner in which certain theatres are at the present time being constructed. In one instance "the theatre" is contained in an inner shell, the outer shell comprising an hotel, residential chambers, and shops. The combination, though doubtless economical, is dangerous, and such a building should never be licensed for public entertainment. Risk by fire in theatres will ever be sufficiently great, but to add to the risk by enclosing such a building with an hotel, and chambers, and shops, can only be regarded, after recent experiences, as an act showing the grossest disregard of human life, and one that should never receive the sanction of the authorities.

## POTTERY IN WALLS.

A PAPER has been communicated by Mr. Alexander Hutcheson, architect, Dundee, to the Society of Scottish Antiquaries, upon the discovery of earthenware jars in the walls of a house in Dundee. It is as follows:—

During the removal of several old buildings on the south side of Nethergate, Dundee, to make way for a new street, in the month of July last year, Mr. George Lowdon, optician, Dundee, called my attention to certain "jugs" or jars which, he said, were to be seen built into the walls of one of the old houses about to be demolished. I lost no time in visiting it. The building was (for it has since been removed) of three storeys in height, with attics in the high pitched roof, which was covered with grey stone slates, and filled up the whole space between two narrow passages called Scott's Close and Harris's Close, the former being on the west side of the building, and close to the site of Whitehall Palace, said to have been used as a residence at different times by James IV., James V., Mary, James VI., and Charles II. It was on this side that the jugs were seen. Three of them were placed in an almost equilateral triangle between two of the west windows of the upper floor, and two at the south side of a window at about the same level in a little room occupying the top of a projecting stone staircase. A sixth jug was afterwards discovered at the north side of the northernmost of the two centre windows, when the roof of a cross two-storey wing was removed. All the jugs were built into the outside of the wall, and had their orifices flush with the face of the wall. When the wall was broken down, the jugs were found to be of various shapes, but all of a reddish-brown glazed ware, having handles on one side. One of the specimens had evidently never been used previous to being built into the wall, because some of the scoræ of the kiln still adhered to the bottom of it. When placed in the walls the jugs lay horizontally, with the handles to one side. Two of the jugs were very much decayed, so much so that only fragments of them remained in the holes. Others were fairly preserved. One of them measured 3 $\frac{3}{4}$  inches across the mouth, widening out slightly in the inside, by 4 inches deep. The remaining two measured 2 $\frac{1}{2}$  inches across the mouth. Great care was exercised when the walls were broken down, but only two of the jars could be taken out tolerably whole; and these are to be deposited for preservation in the Dundee Museum. The jugs all adhered so firmly to the mortar, and some of them were so much decayed that they crumbled to pieces on the mortar being broken. To all appearance they had been built into their places when the wall was originally erected.

My friend, Mr. A. C. Lamb, F.S.A. Scot., who was most assiduous in his efforts to secure the safe removal of the jugs, recalled to my recollection the discovery at a prior date of a similar arrangement of jugs in another old building, known as Wedderburn's Land, which stood further to the south. In this case the jugs were placed at regular intervals beneath the sills of the upper floor windows. Unfortunately, in this instance none of the jugs were got out whole, and the fragments were not preserved. One of the jugs was stated to have been of a curious green glass, and of antique shape. The tradesman who told me this remarked that he



had seen other examples in the town; but a most careful search in the localities he indicated failed to discover them, nor, in being appealed to, could he point them out, and probably the buildings where they occurred have also been removed.

In the course of my inquiries I learned that, so far from the jugs being confined to the outside of Wedderburn's Land, the workmen who took down the walls discovered them in great numbers in the inside walls of the staircase. The staircase was a wide and ample rectangular adjunct on the west end of the main building, and was separated therefrom by a thick stone wall or gable, and it was in this wall, as well as in the front or outer wall of the staircase, that the jugs were found in such numbers; and as in the building in Scott's Close, they were laid horizontally, and had their mouths flush with the inside face of the wall. In this case, being towards the inside of staircase, the openings were all plastered over, but the jugs had not been filled with the plaster, of which there was only so much in the neck or mouth of each jug as was sufficient to hold the plasterwork.

The use of jars or vases in architecture is not unknown, but so far as I am aware no instance has been previously noted of their use in the walls of dwelling-houses. It has been suggested that these jugs may have been intended for birds'-nests. Instances occur in Continental cities of provision having been made in steeples for this purpose. Fosbroke says that pigeon-holes were common in the roofs of Roman houses, and mentions that the upper storey of Egyptian houses is almost always devoted to pigeons.

On a review of the case, I should be inclined to ascribe this instance of the use of jugs to some superstitious observance now forgotten. It must ever be regretted that such an interesting example of this curious architectural feature as that presented by Wedderburn's Land should have been swept away without any skilled examination being made, and thus the opportunity perhaps lost for ever of throwing light on what cannot but be regarded as an omitted, because unsuspected, chapter in the history of the domestic architecture of Scotland.

### PRIMITIVE LAND VALUATION.

A PAPER was read at the last meeting of the Society of Antiquaries of Scotland, on an investigation of the system of land valuation in the Orkney and Shetland Isles, by Captain F. W. L. Thomas, R.N., F.S.A. Scot. The whole subject of early land valuation, he observed, is involved in almost impenetrable obscurity. The special task which Captain Thomas had before him in the present paper was to deduce from existing materials the answer to the question—What is a pennyland? This term is of frequent occurrence in connection with the ancient land valuation of the Hebrides, and as the Hebrides were under Norse dominion till 1266, it appeared probable that a solution of the question would be best found by an examination of the land system of the northern isles. The Orkneys continued to be part of the Norwegian kingdom till 1468, and even then, being merely pledged to James III., they were still ruled by their own laws, which, as regards land tenure, were almost the opposite to those of Scotland. The materials for the investigation are chiefly contained in the rental of the earldom of Orkney, 1497–1503, or within twenty-nine years of the separation from Norway, which is still preserved. In the fifteenth century the land of the Orkneys was, in respect of property, either Earl's (subsequently King's) land, Kirk land, or Odal land. The first two terms required no explanation. The Odal men, who owned land simply by descent, became in course of time so numerous that the constant subdivision of the Odal lands necessarily led to poverty and degradation; and the want of a middle class left them still less able to resist the rapacity of the Scottish earls and feuars, and the donatories of the Crown. In respect of taxation (or skat) for support of the Earl's government, the lands of Orkney were either Bordland, Skatland, Quoyleland, or Towmale. Bordland, being the property of the Earl, paid no skat. Skatland, otherwise called Odal land, included all the arable land of the townships which existed when the ancient or original valuation roll was made. Quoyleland, from being subsequently enclosed, as a rule paid no skat. Though the arable land was frequently repartitioned among the tenants, the house remained in constant possession of the household, and a small piece of pasture land around it was the towmale or tumail. As the demand for arable land increased, the towmale was dug up or ploughed up. No skat was paid for moorland or "fell." It was considered of so little importance that it is not once named in the rental. Wherever lands are taxed, there must be a valuation of some kind—in old records called extent; and for this purpose the Orkneys had at an early period been divided into parts, which came to be denominated urislands or ouncelands, but which there is reason to believe originally were the davach of the former Celtic inhabitants. The meaning of ouncelands was that each paid to the Earl money or produce to the value of one ounce of silver. The ounceland was divided into eighteen parts, each of which had to pay one penny, or the value of one penny, and hence was called a pennyland. The demonstration of this by a detailed analysis of the rental,

along with separate demonstrations of the same nature, for the different denominations of land and land values in Shetland formed the substance of the paper. The general conclusions arrived at were that the davach of the old Celtic inhabitants, being assessed by the Norwegian earls at an ounce of silver, became an ounceland, and was divided into eighteen parts, each paying an eighteenth of a Norse ounce of silver, which was equal in weight to an English penny, from which each subdivision was termed a pennyland. Neither ounce nor pennyland was a measure of surface, but of produce. The ratio of produce must in time have altered, but nominally the tax was not increased. At some period, of which there is no record, but probably in the twelfth century, the pennylands were valued at their purchase, not their annual value, in sterling silver marks—each part so valued being called a markland—at which time the average value of a pennyland was four sterling marks. In the Orkneys, in 1503, the rent of a markland was so nearly uniform as to suggest that the rate of rent had been fixed at a comparatively recent period. In Shetland the assessment by ounces and pennies was abandoned, and that by marks was substituted. The annual rent of a markland was fixed in pennies, and varied from four to twelve pennies, which were paid in fixed proportions of butter and cloth. Mr. G. Goudie and Professor Duns remarked upon the great importance of this paper as a foundation for future inquiries into a subject so complicated and obscure, and which had hitherto baffled the investigation of the most distinguished antiquaries.



### American Elevators.

SIR,—Permit me to call your attention to the following paragraph, which I copy from a New York paper. The remarkable results obtained by the use of our Standard Hydraulic Elevator (as fixed by our New York house, Messrs. Otis, Brothers & Co.) will certainly be a matter of interest to your readers. The ability not only to erect high buildings, but to get as much or even more rent for the upper floors as for the lower floors, is a direct consequence of the use of the elevator, but this result is not reached unless it is made certain that the elevator service is abundant, rapid, inexpensive as to cost of running and maintenance, and (most important of all) absolutely to be depended upon for every day in the year. These results are obtained by the use of our elevators, which have made it possible for Mr. Field to follow the example set him by so many others.

### "New York's Big Buildings."

"Cyrus W. Field has completed his new structure, the Washington Building, at the Battery, and applicants for rooms are so numerous that almost any price can be asked. There are five elevators in the building, and consequently the upper floors bring more money than the lower ones. An idea of the traffic done in one of these huge buildings may be formed from some statistics which Mr. Field has gathered. On an average 18,000 persons a day pass in and out of the Produce Exchange Building, the Mills Building 13,000, the Boreel about 10,000, and the Equitable Life about 15,000."

Yours obediently,  
WM. AUG. GIBSON, President.

American Elevator Company, Old Jewry, E.C.

### ARCHÆOLOGY.

**The Old Hall, Leyland.**—Some improvements are now being made at an ancient farmhouse at Leyland, known locally as "Towd Ha'," and the workmen lately discovered a passage which was traditionally believed to communicate with the parish church, more than half a mile distant. It was found, however, to extend only from the first floor to the ground floor, and was probably a priest's hiding-place, being in all respects similar to those found in residences erected between 1570 and 1680, during the severe persecutions of the Roman Catholic clergy. The Old Hall was built by Robert Charnock, father of Robert Charnock, a priest, whose *alias* was Manley when in hiding. The stone over the principal entrance bears the date 1620, and the crest of the Charnocks, with the letters "I.H.S." in the upper left hand corner, and "M.R." in the right hand corner. There are other monograms which cannot be correctly deciphered. Very great interest in the old place has been raised by the discovery of a recess used as a sanctuary by Father Charnock, and four hiding places, two of which are in the roof where the vestments and sacramental vessels were secreted, one adjoining the chimney, and the fourth above described.



**Discoveries in Upper Egypt.**—Professor Maspero, returning from his annual trip of inspection up the Nile, has just found an unplundered necropolis of immense extent at Ekhmeem, a large provincial town of Upper Egypt, situate about half-way between Assiout and Thebes. As far as has been yet ascertained, the necropolis dates from the Ptolemaic period; but as the work of exploration proceeds it will probably be found that it contains more ancient quarters. The riches of this new burial field would meanwhile seem to be almost inexhaustible. Five great tombs or catacombs already opened have yielded 120 mummies, and within the short space of three hours Professor Maspero verified the sites of over one hundred more similar catacombs, all absolutely intact. The necropolis of Ekhmeem, at a rough estimate, cannot contain fewer than five or six thousand embalmed dead. Of these perhaps not more than twenty per cent. will turn out to be of archaeological or historical value; but the harvest of papyri, jewels, and other funeral treasures cannot fail in any case to be of unprecedented extent. Ekhmeem is the ancient Khemnis—the Panopolis of the Greeks. Its architectural remains are insignificant.

**Pompeian Revival.**—Early next month festivities will be held at Pompeii after the manner of the ancients. The first day a circus will be opened by an imperial procession. At its head the emperor will be borne on a litter, followed by five hundred senators, clients, prætorians, lictors, priests, and a crowd of plebeians. On the second day a nuptial procession will be represented, and in the evening the funeral of a military tribune will take place. The procession will leave the House of the Faun, and, passing through the *Decumanus minor*, will proceed to the Street of Tombs, where the funeral pile will be erected. On the third day, gladiators of all classes will perform in the ancient amphitheatre of Pompeii, in the presence of the emperor, on which occasion the imperial train will be increased by a guard of prætorians on horseback.

## CHURCH BUILDING AND RESTORATION.

**Barnham.**—The foundation-stone of a Primitive Methodist chapel has been laid. The architect is Mr. J. A. Hillam, of King's Lynn, and the builder is Mr. Joseph Palmer, of Thetford.

**Belper.**—St. Peter's Church, Belper, has been reopened after undergoing extensive internal alterations and renovation. All the old-fashioned, uncomfortable, straight-backed narrow pews and the floor of the church have been taken away, and replaced in the nave and aisles with slightly red deal stalls, and in the choir with pitch pine stalls. Additional accommodation has thus been provided. A new wood flooring has been laid down in the first-mentioned, and a tile flooring has been placed in the choir and chancel. A new pulpit and reredos of oak with tracery panels, turned shafts, caps, and bases, have been put in, and marble steps have been placed to the communion rail and table. The interior has been re-painted and decorated. Mr. Fletcher, of Derby, has been the contractor for the seating and flooring; Messrs. Ford & Co., Derby, supplied the pulpit and reredos; Mr. Swaines Bourne, of Birmingham, the windows; and Mr. Hibbert, of Belper, did the painting. The work has been carried out under the superintendence of Mr. F. J. Robinson, architect, Derby.

**Blythburgh.**—The parish church has been reopened after the completion of certain works of restoration, principally affecting the south aisle. The work has been carried out by Mr. R. J. Allen, of Southwold, under the direction of Mr. A. E. Street, M.A.

**Brimsfield.**—St. Michael's Church, Brimsfield, has been reopened after restoration, which has been carried out by Mr. Charles Gyde, of Pitchcombe, under the direction of Messrs. Waller, Son & Wood, architects, Gloucester, at a cost of 800*l*.

**Dunfermline.**—A Baptist church, erected from the designs of Mr. P. S. Henderson, of Edinburgh, has been opened. The church will accommodate about 350 persons on the ground floor, and 250 in gallery, and is estimated to cost about 3,000*l*, including site.

**Etwell.**—A Wesleyan chapel, erected at Etwell, has been opened. The building is of red brick, with dressings of Stanton-by-Ashborne stone, in the Gothic style of the Pointed period. Mr. Garlick, of Burton-on-Trent, is the architect, Mr. H. C. Mellor, the contractor, and Mr. Bassett did the masonry work.

**Forest Gate.**—The new church of St. Saviour is situate at the angle of the Macdonald and Station Roads, upon a site presented by Canon Carver. The style is Early English; the material of the walls internally and externally is red brick, Bath stone being freely used for windows, doorways, arches, &c. The church consists of nave, chancel, north and south aisles, and transepts, and is arranged to seat 1,000 people. The total internal length is about 140 feet, the height 42 feet, and the width 60 feet. The nave, 27 feet in width, comprises seven bays, the arcade on either side consisting of Bath stone columns and moulded arches, having a series of clerestory windows over them. The chancel, 32 feet long, and about the same height and width as the nave, is lighted at the east end by five lofty lancet windows, and by a rose window at the apex of the gable. The roof from end to end of the

church is waggon vaulted, the line between nave and chancel being defined only by the lofty chancel arch, which is carried up to the apex of the vault, and is concentric with the curves of the ribs of the roof. The ribs bear upon detached grey stone shafts which rest upon sculptured corbels of intricate conventional foliage. The corbels are the gifts of various friends. On the south side of chancel is a spacious organ chamber, on the north side two vestries (clergy and choir) capable of being thrown into one when required for meetings, &c. Ample means of ingress and egress are provided by means of south porch, a lobby at west end of north aisle, and a temporary porch occupying a portion of the site of the future tower and spire. A font of Caen stone resting on marble shafts, and enriched with carving, has been given by the Sunday-school children. The church has been erected from the designs of Mr. Edwin Clare, F.R.I.B.A., the contractor being Mr. J. Morter. The carving has been executed by Mr. Allen, the heating and lighting by Messrs. Y. D. Berry & Sons. The total cost of the works, exclusive of special gifts, will be 7,500*l*.

**Ilminster.**—St. Michael's Church, the parish church of Ilminster, has been opened after having undergone complete restoration at a total cost of 1,700*l*. The restoration has been completed under the direction of Mr. E. H. Harbottle, architect, of Exeter.

**Kingsbury.**—The Bishop of London on Tuesday morning consecrated a new church at Kingsbury. It stands on high ground, and forms a picturesque object from the Midland Railway. The church, which consists of nave and chancel, porch, organ-chamber, and vestry—the three latter the gift of the architect, Mr. Butterfield—has been substantially built by Mr. Norris, of Sunningdale.

**Llanbeder.**—The foundation-stone has been laid of a Methodist chapel at Llanbeder, near Crickhowell. Mr. Aaron Davies, of Pontytlottyn, is the architect. The building will seat about 150 persons. It will be built in the Norman style, the materials being pressed red bricks, with white dressings. The interior—seats and rostrum—will be of pitch pine, and the building will be heated by one of Holden's patent stoves. Mr. J. Bruton and Mr. John Jones are the builders.

**Morpeth.**—A Wesleyan Methodist chapel has been opened in Manchester Street. The building occupies the site of the former chapel and of a caretaker's house which adjoined it. The ground slopes rapidly from front to back, and advantage has been taken of this to obtain in the basement a schoolroom, 36 feet by 23 feet, together with a large vestry and classroom. To give sufficient height to these rooms, the floor of the chapel is raised 5 feet above the street level. Externally the chapel measures 55 feet by 40 feet. The front, which is designed in the fifteenth-century Gothic style, contains two deeply-moulded and recessed arched doorways. Surmounting these is a central gable 45 feet high, and containing a large traceried window of five lights. The lower wing walls on each side of this gable are also pierced by two tiers of windows similarly treated. The whole front, which is built of Nunriding stone, is very effective, and is a great ornament to that part of the town. Internally the pews, rostrum, gallery front, &c., are of pitch pine, and are effectively designed and arranged, ornamental perforations playing an important part in their treatment. The chapel is seated for 360 persons, and the entire cost is 1,600*l*. The warming apparatus is by Messrs. Dinning & Cooke, of Newcastle; the gasfittings by Messrs. Jones & Willis, of Birmingham; and the ventilation by one of Boyle's air-pump ventilators. The lead glazing is by the Gateshead Stained Glass Company. The contractor for the whole is Mr. D. M. Spence, of Amble; and the architects are Messrs. S. Oswald & Son, of Newcastle-on-Tyne, under whose superintendence the work has been executed.

**Prestwich.**—The ringing of the old peal of bells in the tower of the parish church has been resumed. In the summer of 1880 an alarm was given by the ringers that the tower was unsafe, and that the cracks already existing in the masonry were extending. After an examination by Messrs. Medland & Henry Taylor, architects, of Manchester, it was decided to thoroughly restore the tower, and the work is now all but completed. The tower is now stronger and more stable than it has been probably at any previous period of its history. Improvements have also been effected in other parts of the edifice. The western gallery has been removed, and the fine tower arch and windows thrown open to the church. The ancient oak ceilings of the nave and chancel have been carefully restored, and the roofs strengthened, repaired, and reslated. New oak roofs are being placed in the north and south aisles in lieu of the much-decayed old timber, but the old design has been strictly followed. Designs have likewise been made and a faculty obtained for the enlargement of the vestry and for a new organ chamber.

**Stainland.**—The Wesleyan chapel at Stainland has just been reopened after undergoing renovation and improvement. The work has been carried out under Mr. T. L. Patchett, architect, Stainland.

**Warley.**—Plans have been prepared for a new vicarage for St. John's, Warley, by Mr. C. F. L. Horsfall, architect, Halifax. It will occupy the spare ground close by the church and schools. All the outside walls are to be built with cavities, so as to effectually exclude damp.



**Wotton-under-Edge.**—The work of restoring and re-seating the parish church of Wotton-under-Edge has been completed. The work has been carried out by Mr. R. Fisher, builder, of Wotton, under the direction of Messrs. Waller, Son & Wood, architects, of Gloucester.

### SCHOOL BUILDINGS.

**Darlington.**—The foundation-stones for a new Sunday school in connection with East Road Wesleyan Chapel have been laid. The cost of the building, including land, will be 1,859*l.*, Mr. F. W. Brooks, of Darlington, being the architect.

**Earlsdon.**—The memorial-stones of a Wesleyan chapel and school have been laid. The cost of the building will be about 800*l.* Mr. W. Tomlinson, of Coventry, is the architect, and Mr. A. Beacham, of Allesley, the builder.

**Leith, N.B.**—The Leith School Board have decided on an extension of the Victoria School, Newhaven. The cost of the extension is estimated at 2,150*l.*, extra accommodation being provided for 240 children.

**Romford.**—The memorial-stone of a school and classrooms being erected in rear of the Congregational Church has been laid. Accommodation will be provided for 350 children. The exterior of the building will be faced with Kentish rag stone, with Bath stone dressings, the style being an early kind of Gothic, similar to the church. The architect is Mr. E. C. Allam, of Romford. Mr. William Wood is the builder.

**Stalham.**—The foundation-stone of a Baptist chapel and school has been laid, accommodation for 400 in the chapel and 200 children in the school being provided. Mr. George Baker, of Queen's Road, Yarmouth, is the architect, and Mr. W. Evans, of South Walsham, the builder. The cost will be about 1,520*l.*

**Workington.**—A school for 250 infants has recently been erected for the Workington School Board, at Westfield, which has cost 3*l.* per head; this is to be supplemented with a department for 250 boys, at a cost of 3*l.* 15*s.* per head, exclusive of fittings. The boys' school is to be built of rubble and brick, with stone dressings, cemented on outside and rough cast, plastered on the inside, with a wood dado 4 feet high. The whole of the carpenter and joiners' work picked Baltic, 1½-inch tongued narrow batten floors, and all internal work to be stained and varnished. The site of the school is a mile and a half from any quarry or station. Mr. James Howes is the architect.

### ART WORKMANSHIP.

**Edinburgh.**—A new mantelpiece was on Monday added to the northmost fireplace in Parliament House similar in construction to that enclosing the fireplace near the south end. Constructed of dark-coloured oak, this latest addition to the ornaments of the noble hall has a broad and massive shelf, supported on each side by two fluted pilasters, with carved capitals, showing cherub faces surrounded by wreaths of leaves and fruit in relief. The lintel panels, three in number, are separated by trusses bearing carved satyrs in relief, and enclose reliefs of scenes from "The Merchant of Venice." Reading from right to left, the first presents Shylock and his friend in conference before entering the Court. In the next appears the Court scene, and the third shows the discomfited Shylock leaving the scene of his humiliation. The mantelpiece, which is dedicated by Mr. Charles Robertson, advocate, to the memory of his father-in-law, James Walker of Dalry, advocate, was designed by Mr. W. Adam, Queensferry Street, Edinburgh, the carved work being executed by his workmen. The similar mantelpiece at the other end of the hall was dedicated by Mr. Robertson to the memory of his father, George Robertson Scott, of Benholm, advocate, and was also designed and erected by Mr. Adam.

### GENERAL.

**Mr. Alfred Gilbert** is about to leave Rome and settle in London. Sir Frederick Leighton has already purchased Mr. Gilbert's contribution to the forthcoming Academy Exhibition, and has also given the young sculptor a commission for a work which may be ready for the exhibition of 1885.

**A Painting** by the late Mr. F. P. Poole, R.A., *The Beleaguered City*, has been presented to the Wolverhampton Art Gallery by Mr. E. Shaw. Two pictures by the local artist, Mr. Bird, R.A., have also been presented by Mr. H. Loveridge, viz., *The Birth* and *The Christening*.

**Mr. John Sparkes**, of the Art Training School at South Kensington, will write a handbook on "The Influence of Schools of Art on Manufactures," which will form one of the series to be issued in connection with the Health Exhibition.

**The Exhibition of French Decorative Art** in the Corporation Galleries, Glasgow, will be closed on Wednesday. The collection

of pictures by old masters which has been exhibited for the past year in the Bethnal Green Museum will be transferred to the Glasgow galleries.

**The Art Exhibition at Chester** has been postponed for a few weeks, in consequence of the death of the Duke of Albany. The delay will give opportunity for more extended arrangements.

**The City of London Society of Artists and Guildhall Academy of Art** have elected the following artists as members, viz.:—Messrs. Phil. Morris, A.R.A., Chas. Burt, Robt. Barnes, A. M. Rossi, Wm. Linnell, Leslie Thomson, V. P. Yglesias, and Chas. Sney.

**A Lecture on "Art applied to Coach-Building"** will be delivered at the Westminster Town Hall on next Tuesday by Mr. H. Julian.

**A Portrait of William Murdoch**, the inventor of gas-lighting and the maker of the first locomotive in England, has been presented to the Art Gallery of Birmingham.

**The Fragment of Mosaic Pavement** discovered in the excavations for the extension of the District Railway has been claimed by the authorities of the parish of St. John the Baptist Walbrook.

**A Carved Alabaster Memorial Reredos** has been placed in St. Mary's Church, Lawford. It was designed by Mr. C. F. Hayward, of Montague Street, Russell Square, and executed by Mr. Earp, of Lambeth.

**St. Mary's Church**, High Offley, is proposed to be restored. The church is an ancient Gothic building, the register dating from the year 1689, and greatly needs restoration. The roof of the nave, said to be one of the finest in the county, is at present hidden by a wooden ceiling.

**Manchester Society of Architects.**—The Society prize (value 5*l.* 5*s.*) offered for the best essay on the Manchester Cathedral has been awarded to Thomas Locke Worthington. The essay comprises an historical and architectural description of the cathedral from its foundation, with illustrations. Mr. James P. Holden's prize (5*l.* 5*s.*) for the best set of measured drawings of the Renaissance tombs in the old churches in and about Manchester, has been awarded to Frank L. Heslop.

**The Designs of Mr. Wm. Owen, A.R.I.B.A.**, 134 Deansgate, Manchester, have been selected, in open competition, for the new Post Office buildings to be erected at Knutsford, Cheshire.

**Mr. W. I. Chambers**, Dublin, has been appointed by the Presbyterians of Dundalk as architect for extensive improvements contemplated by them, including new hall, school residence, &c.

**Mr. Stephen Shaw**, of Kendal, has been appointed architect for the new church and tower at Crook, near Kendal, his design having been accepted in a limited competition.

**An Anonymous Subscriber** has contributed 500*l.* to the fund for the completion of the Edinburgh University Hall.

**Miss Carter**, of Haslingden, has given 3,000*l.* for a new church in the Stonefield district of the parish.

**Belmont Castle**, the seat of the Earl of Wharcliffe, near Coupar-Angus, in Perthshire, was destroyed by fire on Monday night. The castle was in the ancient baronial style, and was recently remodelled. Several valuable pictures were among the property destroyed.

**A Public Hall** is to be erected at Kenmore, N.B., from a design by the Countess of Breadalbane. The memorial-stone was laid on Monday last by the Earl of Breadalbane.

**The Fishmongers' Company** have voted an additional sum of 4,000*l.*, to be paid in two annual instalments, to the Equipment Fund of the Central Institution of the City and Guilds of London Institute.

**The Carpenters and Joiners of Berlin** have resolved to demand from employers (1) the reduction of the hours of labour to nine and a half hours, (2) suspension of all work on Sunday, and (3) a higher rate of wages, on pain of a strike.

**Mr. Parker**, City Surveyor, Hereford, has served a notice upon the vicar and churchwardens of All Saints Church, requesting them to either pull down or repair the steeple, which he pronounces to be unsafe. Of late many pieces of masonry have fallen away from the steeple.

**The Chamber of Commerce of Carrara and Massa** has recently published two statistical reports on the production of marble during ten years from 1873 to 1882, from which it appears that Carrara and Massa produced 1,454,403,040 kilogrammes of marble, of which 1,184,803,888 were exported.

**Sir Edward Watkin** has under consideration plans for the erection of houses for the poor which shall come in more direct competition with the existing lowest class accommodation than do Peabody's Buildings. In these buildings the average rent of each dwelling is 4*s.* 8½*d.* a week, and for each room 2*s.* 1½*d.* Sir Edward Watkin has asked for tenders for rooms that may be let at 1*s.* 6*d.* a week, or even under. These are now being prepared, and should they show the plan to be feasible the buildings will forthwith be commenced.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, APRIL 26, 1884.

### COMPETITIONS OPEN.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**SUNDERLAND.**—May 19.—Designs are invited for Laying out Twenty Acres of Land, the Mill Farm and Broad Meadows, Durham Road, Sunderland, for Villas, Terraces, or Street Rows, with Sewerage, &c. Premiums of Thirty and Twenty Guineas. Messrs. Duncan & Duncan, Solicitors, 3 Market Place, South Shields.

### CONTRACTS OPEN.

**BELTHORN.**—April 30.—For Rebuilding Chapel. Mr. J. Yates, Architect, 3 Tackett's Street, Blackburn.

**BOLTON.**—April 28.—For Building Mill. Messrs. Bradshaw & Gass, Architects, 19 Silverwell Street, Bolton.

**BOX.**—April 29.—For Enlarging Church. Mr. J. D. Sedding, Architect, 18 Charlotte Street, Bedford Square, W.C.

**BRIGHTON.**—April 28.—For Enlargement, &c., of Station Offices. Mr. A. Sarle, London Bridge Terminus.

**CAIRNBATHIE.**—May 3.—For Building Dwelling-house. Messrs. Cochran & Anderson, Advocates, 152 Union Street, Aberdeen.

**CARLISLE.**—May 15.—For Building Sewage Screening Chamber, &c. Mr. H. U. McKie, City Surveyor, Town Hall, Carlisle.

**CARLISLE.**—May 15.—For Building Fire-engine Station. Mr. H. McKie, City Surveyor, Town Hall, Carlisle.

**CARLINGHOW.**—April 26.—For Building Parsonage. Mr. Michael Sheard, Architect, Batley.

**CASTLEFORD.**—April 30.—For Building Residence and Surgery. Mr. J. H. Brewerton, Architect, Castleton.

**COLNE.**—April 28.—For Construction of Outfall Sewerage Works. Mr. Henry Bancroft, C.E., 83 Mosley Street, Manchester.

**DARLINGTON.**—April 30.—For Building Inspector's House and Six Cottages. Mr. W. Bell, Architect, Railway Offices, Northgate, Darlington.

**ELLAND.**—April 28.—For Building Six Houses. Mr. William Ackroyd, Southgate, Halifax.

**FREMANTLE.**—April 26.—For Building Girls' School. Mr. W. J. Bunney, Grosvenor Villa, Shirley Road, Southampton.

**GATEHOUSE OF FLEET.**—April 30.—For Building Town Hall. Mr. J. R. Pearson, Architect, 74 George Street, Edinburgh.

**GLASGOW.**—May 7.—For Building Workmen's Houses. Messrs. Thomson & Turnbull, Architects, 122 Wellington Street, Glasgow.

**GRANGETOWN.**—May 5.—For Building Sixty-two Cottages. Messrs. James, Seward & Thomas, Architects, St. John's Square, Cardiff.

**GRAVESEND.**—For Boat Sheds, Dressing-room, &c., for the Rowing Club. Mr. E. Bennett, Architect, Gravesend.

**HAINWORTH.**—April 26.—For Building School. Mr. Bailey, Architect, 9 Market Street, Keighley.

**HANSLOPE.**—For Rebuilding Spire of Church. Mr. J. O. Scott, Architect, 31 Spring Gardens.

**HOMERTON.**—May 14.—For Building Ambulance Station. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**KILWENDEAGE.**—May 5.—For Additions to Mansion. Mr. G. Morgan, Architect, 24 King Street, Carmarthen.

**KIMBERLEY.**—For Building Chapel and Schools. Mr. A. H. Goodall, Architect, Nottingham.

**LEEDS.**—April 26.—For Works in Erection of Coach Builder's Premises. Mr. D. Dodgson, Architect, 18 Park Row, Leeds.

**MARYPORT.**—April 29.—For Building Dwelling-house. Messrs. Eaglesfield & Son, Architects, Maryport.

**MIDDLESBROUGH.**—April 30.—For Passenger Station at Whitehouse Crossing. Mr. W. Bell, Railway Offices, Northgate, Darlington.

**MIDLAND RAILWAY.**—May 2.—For Building Stables, Loose Boxes, &c., West Kensington. Clerk of Works, 111 St. Pancras Old Road, N.W.

**NATIONAL GALLERY.**—May 5.—For Extension of Buildings. Office of Works, 12 Whitehall Place, S.W.

**NEWTON STEWART.**—May 3.—For Building M'Mullan Hall and Additions to Machermore Castle. Mr. Richard Park, Architect, Newton Stewart.

**NORWICH THORPE.**—May 1.—For Building Railway Station. The Engineer, Liverpool Street Station, E.C.

**OVERTON.**—April 26.—For Erection of Farm Buildings. Mr. John Hillary, Longparish, Hants.

**SALISBURY.**—For Building House. Messrs. J. Harding & Son, Architects, Salisbury.

**SHARPLES.**—April 28.—For Building Schools and Porter's Lodge, &c., to Eden Orphanage. Messrs. Bradshaw & Gass, Architects, 19 Silverwell Street, Bolton.

**SHAYINGTON-CUM-GRESTY.**—May 5.—For Enlargement of Board School. Mr. Bower, Architect, Nantwich.

**SOUTH SHIELDS.**—April 28.—For Additions to Infant School. Mr. J. H. Morton, Architect, South Shields.

**SWINDON.**—April 30.—For Building Schools. Mr. W. H. Read, Architect, Swindon.

**SWINDON.**—May 14.—For Erecting Block of School Buildings. Mr. W. H. Read, Architect, Swindon.

**URTON CROSS.**—April 29.—For Erecting Block of School Buildings. Mr. J. T. Newman, Architect, 2 Fen Court, E.C.

**WALSALL.**—May 10.—For Erection of Farm Buildings and other Works at Brockhurst Farm for the Corporation. Mr. Samuel Wilkinson, Town Clerk, Bridge Street, Walsall.

**WARLEY.**—May 3.—For Building Parsonage, &c. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

**WARRINGTON.**—May 5.—For Extension of Market (Foundations). Mr. T. Longdin, Borough Surveyor.

**WELLINGTON.**—May 1.—For Additions to Board Schools. Mr. Randal, Architect, Betton House, Shrewsbury.

**WEST HARTLEPOOL.**—May 1.—For Building Church. Mr. J. Garry, Architect, 1 Church Street, West Hartlepool.

**WESTLEIGH.**—April 30.—For Alterations to Buildings at Print Works. Mr. E. Godward, Architect, New Mills, near Stockport.

**YORK.**—May 1.—For Building House and Premises. Mr. W. G. Penty, Architect, 34 Coney Street, York.

**YORK.**—April 29.—For Building Six Cottages. Mr. W. Brown, Architect, City Chambers, Clifford Street, York.

### TENDERS.

#### ABBEYLEIX.

For Building Dwelling-house at Abbeyleix, for Lord de Vesci. Mr. W. I. CHAMBERS, Architect, Dublin.

HARRIS, Monasterevan (accepted) . . . £2,060 0 0

N.B.—There were five estimates, ranging from £2,500 to the accepted one, which was subsequently reduced to £1,800 by omitting portions of the work.

#### ALPHINGTON.

For Building Dwelling-house and Offices, Alphonson, for Mr. F. Loram. Messrs. J. W. ROWELL & SON, Architects, Newton Abbot and Torquay.

Pullen, Exeter . . . . . £1,568 9 0

Moass & Son, Exeter . . . . . 1,425 0 0

Page & Sons, Kennford . . . . . 1,415 0 0

Turner & Skinner, Honiton . . . . . 1,413 5 0

Coles & Knott, Alphonson . . . . . 1,317 8 0

Gibson, Exeter . . . . . 1,275 0 0

Gale, Exeter . . . . . 1,272 13 9

Manley, Exminster . . . . . 1,250 0 0

Gooding, Exeter . . . . . 1,201 18 0

PERKINS & HOLMES, Alphonson (accepted) 1,034 10 0

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

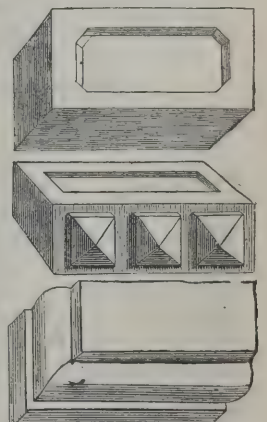
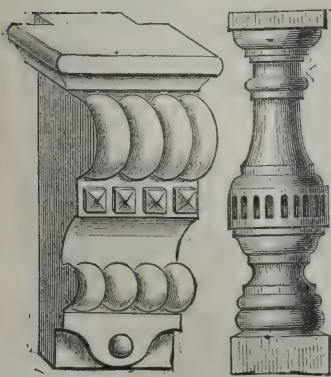
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**AMBLECOTE.**

For Works of Sewerage, Amblecote. Mr. W. FIDDIAN, Surveyor, 98 High Street, Stourbridge.	
Stinson & Kellett, Leicester	£1,887 6 8
Hughes, Dudley	1,565 10 8
Guest, Stourbridge	1,447 7 0
LAW, Kidderminster (accepted)	1,196 18 1

**BASINGSTOKE.**

For Building House and Stabling, Chequers Close, Basingstoke, for Mr. H. Allen. Messrs. RAYBIRD & SONS, Architects. Quantities by the Architects.	
Grace, Stourbridge	£2,233 8 11
Batten, Everton	2,058 0 0
Goodall, Basingstoke	1,978 15 0
Musellwhite, Basingstoke	1,919 0 0
Kent & Lunn, Basingstoke	1,915 15 6
SMS, Basingstoke (accepted)	1,930 0 0
For Supply of Two Purifiers (15 feet square and 4 feet deep) for the Basingstoke Gas and Coke Company. Mr. W. HIGGS, Engineer.	
Westwood & Wright, Dudley	£570 0 0
Ashmore & White, Stockton-on-Tees	547 0 0
Willey & Co., Exeter	496 0 0
Walker, Donnington	494 0 0
COCKEY & SONS, Frome (accepted)	494 0 0
Laidlaw & Son, Glasgow	486 0 0

**BRIGHOUSE (YORKS.).**

For Works in Forming Streets, Manley's Estate, Brighouse. Mr. E. TAYLOR, Surveyor, Hipperholme.	
Hudson & Kitchen, Halifax	£548 17 0
Kellett & Co., Leicester	520 16 11
Jagger, Brighouse	495 14 0
Emsall, Brighouse	450 0 0
Nutton, Elland	443 5 0
Jowett, Brighouse	405 0 0
Dovener, Sowerby Bridge	394 5 0
Crossley, Lightcliffe	392 0 0
Pearson, Cleckheaton	390 0 0
Travis & Wells, Hipperholme	367 8 10
Naylor, Cleckheaton	367 0 0
Balmforth, Elland	321 0 0
SLINGER, Cleckheaton (accepted)	315 11 9

**BRIGHTON.**

For Painting Street Lamp, Lamp Pillars, Water Pillars, Iron Fencing, Drinking Fountains, &c., Brighton. Mr. P. C. LOCKWOOD, C.E.	
Arnold & Marshall, Brighton	£1,135 0 0
Fowler, Tarnham Green	999 0 0
HUDSON, KEARLEY & Co., Brighton (accepted)	793 0 0

**BROMLEY.**

For a Pair of Semi-detached Villas, Elmfield Road, Bromley, Kent, for Mr. J. Howard. Messrs. BEESLEY & WILLIAMS, Architects, Buckingham Street, Adlphi.	
Payne	£1,867 0 0
Crossley	1,835 0 0
Pearse	1,755 0 0
Arnand	1,720 0 0
BALDING (accepted)	1,667 0 0
Williams	1,588 0 0
Lay	1,552 0 0

**CANNOCK.**

For Additional Accommodation to Five Ways Board School (for 160 Children) for the Cannock School Board. Mr. B. BAKER, Architect, Willenhall.	
Greensell, Wyvely	£736 0 0
Woodend, Birmingham	733 11 0
Wyley, Wolverhampton	729 10 0
Guest, Wolverhampton	725 0 0
Bradney & Co., Wolverhampton	715 5 0
Anderson, Cannock	713 13 9
Tildesley, Willenhall	700 0 0
Cresswell, Walsall Wood	697 0 0
Reynolds, Cannock	684 0 0
Lynex, Walsall	648 0 0
Barton, Hednesford	641 0 0
MASON, Hednesford (accepted)	609 0 0

**CHAPELTOWN.**

For Building Primitive Methodist Chapel and School, Chapeltown, near Sheffield. Mr. WALTER J. SYKES, Architect, Hoyland. Quantities by the Architect.	
Marsden, Chapeltown, mason's work, &c.	£250 0 0
Executors of late John Carr, Barnsley, joiner's work	160 0 0
Chadwick, Sheffield, slater's and plasterer's work	52 0 0
Rawlin, Hoyland, plumber's, glazier's, and painter's work	25 0 0
Total	£487 0 0

**CHELTENHAM.**

For Erection of Boarding House, Cheltenham. Mr. J. MIDDLETON, Architect.	
	House. Annexe. Dado. Extra for
Taylor	£4,519 2,677 291
Cowdery & Sons	4,451 737 53
Gibson	4,320 682 689
Avan	4,292 702 94
Parker	4,271 773 91
Dover	4,170 695 55
Scammell	4,137 712 150
King	4,054 660 84
Howell & Son	3,990 735 103
Rositer	3,913 626 66
Marshall	3,797 632 232
Inwood	3,754 660 60
A. C. & S. Billings	3,727 612 77
Foster & Dicksee	3,665 632 50
Jones	3,560 570 70
COLLINS (accepted)	3,500 575 50

**CHISWICK.**

For Road Works for the Chiswick Improvement Commissioners. Mr. G. R. STRACHAN, Surveyor.	
Coat, Hammersmith	£1,825 0 0
Mowlem & Burt, Westminster	1,809 0 0
Nowell & Robson, Kensington	1,770 0 0
Trehearne, Chelsea	1,677 0 0
RUTTY, Bromley-by-Bow (accepted)	1,596 0 0
Surveyor's Estimate	1,600 0 0

**CLIFTON.**

For the Erection of Four Dwelling-houses at Gin Pit Hill, Clifton, near Brighouse, Yorks, for Mr. Henry Baintow. Mr. R. F. ROGERSON, Architect, Brighouse.	
Accepted Tenders.	
Cross & Son, mason, Brighouse.	
Rayner, joiner, Rastrick.	
Brooke, plumber, Brighouse.	
Gledhill & Barraclough, plasterer, Brighouse.	
Smithies, slater, Bradford.	
Naylor, painter, Brighouse.	
Total cost, £531 17 6.	

**DARTMOUTH.**

For Alterations and Additions to St. Petrock's Chapel of Ease, Dartmouth. Mr. GEORGE H. BIRCH, Architect, 68 Lincoln's Inn Fields.	
Dart, Crediton	£3,721 0 0
Dove Bros., London	3,475 0 0
Blowey, Plymouth	3,420 0 0
Pillar & Sons, Dartmouth	3,165 17 6
* Accepted, subject to deductions.	

**DUDLEY.**

For Additions to Netherton Board Schools, for Dudley School Board. Mr. J. P. MARSH, Architect, Dudley.	
Bate, Dudley	£237 0 0
Holland & Son, Dudley	230 0 0
Nelson & Son, Dudley	223 0 0
Love & Flint, Dudley	219 15 0
Watchorn, Netherton	215 0 0
Webb & Round, Dudley	215 0 0
Cockin & Sons, Old Hill	193 10 6
Willets, Old Hill	189 0 0
Golding, Netherton	187 0 0
HARVEY, Netherton (accepted)	184 0 0

**EARL SHILTON.**

For Gas Tank at Earl Shilton Gas Works, 42 feet in diameter by 14 feet deep.	
Pegg, Earl Shilton	£482 0 0
Lane, Earl Shilton	475 0 0
Fort, Buckle & Co., Leicester	440 0 0
Smith, Belgrave, Leicester	362 0 0
WARD, Leicester (accepted)	265 0 0

**GRANGEMOUTH.**

For Building Town Hall, Grangemouth, N.B. Accepted Tenders.	
Dick, Polmont, mason	
Williamson, Grangemouth, joiner	
Russell, Grangemouth, slater	
Taylor, Grangemouth, plumber	
Miller, Grahamstown, plasterer	
	£4,294 0 0

**HALIFAX.**

For Re-pewing, &c., Wesley Chapel, Halifax. Mr. J. FARRAR, Architect.	
Accepted Tenders.	
Halstead Bros., Eastwood, joiner	£850 0 0
Binns, King's Cross, painter	115 0 0
Naylor, Halifax, plumber	70 0 0
Bancroft & Son, Halifax, plasterer	65 7 6
For Building Six Storey Fireproof Mill, Scotch Room, Warehouse, Boiler, and Engine-houses, Chimney, &c., at Springwood, Holywell Green, near Halifax. Messrs. HORSFALL & WILLIAMS, Architects.	
Accepted Tenders.	
Crawshaw Bros., Rippolden, mason	£5,933 0 0
Dickinson, Bolton, wrought-iron and concrete	3,193 0 0
Hanson, Halifax, joiner	1,800 0 0
Mackrill, Elland, cast iron	1,430 0 0
Naylor, Halifax, plumber	510 0 0

**HENDON.**

For Main Drainage Works, Hendon. Mr. JOHN POLLARD, C.E.	
FORD & EVERETT (accepted)	£31,070 0 0

**HERNE BAY.**

For Hall, Lavatories, Refreshment Department, Offices and Shops, at Herne Bay, for the Herne Bay Pavilion, Pier, and Promenade Company, Limited. Mr. C. N. MCINTYRE NORTH, Architect, 15 Borough High Street, S.E. Quantities supplied.	
Richardson Bros., London	£2,365 0 0
Downs, London	2,319 0 0
Welby, Herne Bay	2,300 0 0
Marsland, London	2,285 0 0
Ingleton, Herne Bay	2,199 0 0
Foad, Whitstable	2,187 0 0
Cornelius, Whitstable	2,175 0 0
Shrubsole, Faversham	2,139 0 0
Stiff, Dover	2,112 0 0
Adams, Herne Bay	2,110 0 0
Joselyne, London	2,080 0 0
Amos & Foad, Whitstable	1,923 0 0

**KIDWELLY.**

For the Erection of the Mountain School, with Teacher's Residence, at Mynyddygareg, for the Kidwelly School Board. Mr. GEORGE MORGAN, Architect, Carmarthen. Quantities by the Architect.	
Reynolds & Evans	£1,908 0 0
Randell	1,495 0 0
Bassett, Davies & Hopkins	1,467 0 0
Hughes	1,349 0 0
THOMAS & JOHN & J. EDWARDS (accepted)	1,190 0 0

**HIPPERHOLME.**

For Building School at Hipperholme. Messrs. HORSFALL & WILLIAMS, Architects, Halifax.	
Accepted Tenders.	
Dawson, Lightcliffe, mason	£425 0 0
Woodhead, Lightcliffe, joiner	220 0 0
Rushworth & Firth, Halifax, slater	131 10 0
Naylor, Halifax, plumber	62 0 0
Travis, Hipperholme, heating	50 16 0
Salmon, Barnes & Co., Ulverstone, revolving shutters	25 4 0

**LEAMINGTON.**

For Furnishing certain Rooms at the Municipal Buildings, Leamington. Mr. J. CUNDALL, Architect.	
Dowler, Leamington	£1,885 0 0
Smee & Co., London	1,219 0 0
White, Leamington	1,217 0 0
Ratcliff & Co., London	1,155 0 0
Morris & Norton, Birmingham	1,155 0 0
Taylor & Andrew, Leamington	1,040 0 0
FLUCKNETT & STEVENS, Leamington (accepted)	1,032 0 0

**LONDON.**

For Pulling Down and Rebuilding the George Public House, Waterloo Road, for Messrs. Watney & Co. Mr. C. W. BOVIS, Architect.	
Clarke & Bracey	£4,970 0 0
Hall, Beddall & Co.	4,774 0 0
Fish, Prestige & Co.	4,763 0 0
Patman & Fotheringham	4,763 0 0
For Schoolkeeper's House, Playground, Boundary Walls, &c., Olga Street, for the London School Board. Mr. E. H. ROBSON, Architect.	
F. & P. J. Wood	£1,193 0 0
McCormick & Son	1,147 0 0
Sargeant	1,047 0 0
Atherton & Latta	990 0 0
For Repairs, Alterations, &c., to St. James's Church, Piccadilly. Mr. J. T. WIMPERIS, Architect.	
Durant	£3,412 0 0
Patrick & Sons	2,462 0 0
Stanley Bird	2,132 0 0
Servivener & Co.	2,079 0 0
Bywaters	1,939 0 0
Brass	1,743 0 0
Fish, Prestige & Co.	1,592 0 0
Lea	1,379 0 0
For the Alterations and Additions to the Commercial Tavern, Battersea Park Road, for Messrs. J. Carter Wood & Co., the Artillery Brewery, Victoria Street, Westminster. Mr. JOHN CALDER, Architect. Quantities by Mr. Edward Crutchloe, the Albert Chambers, Victoria Street, Westminster.	
Gregory	£1,675 0 0
Axford	1,625 0 0
Falkner	1,595 0 0
Boyce	1,520 0 0
Kin & Sons	1,490 0 0
Stilling	1,340 15 0
STEPHENS (accepted)	1,195 0 0
For Rebuilding 287 Oxford Street. Mr. C. N. BRAZLEY, Architect.	
Longmire & Burge	£9,800 0 0
Stimpson & Son	9,799 0 0
Higgs & Hill	9,740 0 0
Lawrance & So. s	9,684 0 0
Lathey Bros.	9,66 0 0
Brass	9,627 0 0
Larter	9,492 0 0
Holliday & Greenwood	9,477 0 0
Ashby Bros.	9,461 0 0
Bywaters	9,247 0 0
NIGHTINGALE (accepted)	8,979 0 0
Boyce	8,973 0 0
For Building Stables, Loose Boxes, and Omnibus Shed, Cricklewood Lane, for the London General Omnibus Company. Quantities by Mr. Bolton, Lincoln's Inn Fields.	
Webb & Rosser	£1,398 0 0
Egan & Co.	1,253 17 0
Smith	1,229 0 0
Cashire	1,228 8 11
Rider & Hunt	1,201 0 0
Hack	1,197 0 0
Allard	1,187 0 0
Priestley & Gurney	1,195 0 0
Parker	1,175 0 0
Haynes	1,150 0 0
Higgs	1,150 0 0
Jackson & Todd	1,127 10 0
Aldridge & Co.	1,125 0 0
Richens & Mount	1,112 0 0
Garrud	1,083 10 0
SCHARLES & WILLIAMS (accepted)	1,054 0 0
For Enlarging of Board School, Webber Row, Lambeth. Mr. E. R. ROBSON, Architect.	
Williams & Son	£9,750 0 0
Lathey Bros.	9,750 0 0
Bangs & Co.	9,745 0 0
Pritchard	9,636 0 0
Shurmur	9,631 0 0
Reading	9,482 0 0
Wood	9,294 0 0
Downs	9,277 0 0
Kirk & Randall	9,200 0 0
Smith & Sons	9,151 0 0
Marsland	9,135 0 0
Hunt	9,093 0 0
Jerrard	9,093 0 0
Touge	9,091 0 0
Holloway	9,043 0 0
Oldrey	8,996 0 0
Grover	8,986 0 0
Hart	8,554 0 0
Wall	8,710 0 0
Stimpson & Co.	8,670 0 0
Goodman	8,574 0 0
Wall Bros.	8,547 0 0



**LONDON—continued.**

For Enlargement of Lewisham Bridge School, for the London School Board. Mr. E. R. ROBSON, Architect.	
Wool . . . . .	£3,065 0 0
Larke & Son . . . . .	2,962 0 0
Outwaite & Son . . . . .	2,873 0 0
Patman & Fotheringham . . . . .	2,867 0 0
Bangs & Co. . . . .	2,849 0 0
Grover . . . . .	2,840 0 0
Shurmer . . . . .	2,840 0 0
Gorrum . . . . .	2,837 0 0
Wall Bros. . . . .	2,833 0 0
Pritchard . . . . .	2,826 0 0
Atherton & Latta . . . . .	2,815 0 0
Smith & Sons . . . . .	2,808 0 0
Kirk & Randall . . . . .	2,800 0 0
Jerrard . . . . .	2,779 0 0
Howell & Son . . . . .	2,762 0 0
Holloway . . . . .	2,537 0 0

**MALDON.**

For Building Eight Cottages near the Waterworks at Maldon. Mr. CHARLES PERTWEE, Architect, Chelmsford.	
Coult . . . . .	£1,171 0 0
Gozzett . . . . .	1,155 0 0
Rudrum . . . . .	1,123 12 0
Newman . . . . .	1,010 15 6

**MORECAMBE BAY.**

For Building Church at Silverdale, Morecambe Bay. Mr. BALI, Architect, Manchester.	
CROSSFIELD BROS., Arncliffe (accepted).	
Cost about £5,000.	

**NAFFERTON.**

For Building a Couple of Semi-detached Villas at Nafferton, near Driffield. Mr. WILLIAM H. TODD, Architect, Hull.	
Leason . . . . .	£804 9 0
West . . . . .	760 0 0
Morris . . . . .	709 18 0
Dickenson . . . . .	697 16 0
Longbottom . . . . .	690 18 0
Gage . . . . .	683 16 0
Barns . . . . .	675 0 0
BROADLEY, Nafferton, Hull (accepted).	668 10 0
Stephens, n . . . . .	602 0 0

**NEWCASTLE-ON-TYNE.**

For Erection of new Buildings for Eye Infirmary, Newcastle-on-Tyne. Messrs. NEWCOMBE & KNOWLES, Architects.	
T. & R. LAMB, Gateshead (accepted).	£3,100 0 0
For Building Stores, Warehouse, Dwelling-houses, &c., for the West Pelton Industrial Society. Mr. W. L. NEWCOMBE, Architect, Newcastle-on-Tyne.	
JENNINGS, Jun., Newcastle (accepted).	£2,360 0 0

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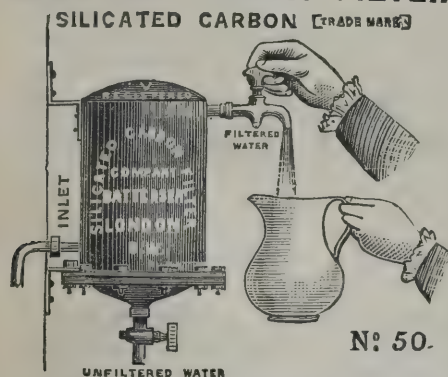
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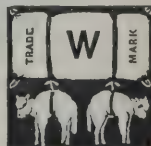
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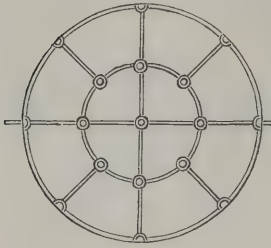
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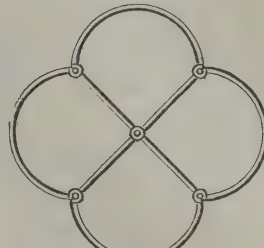
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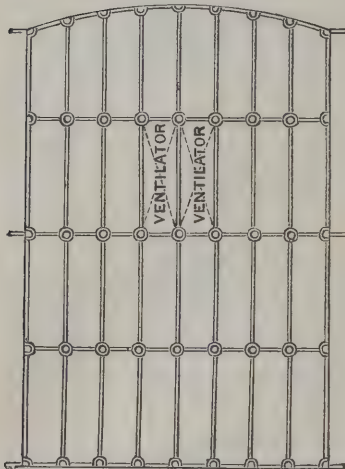
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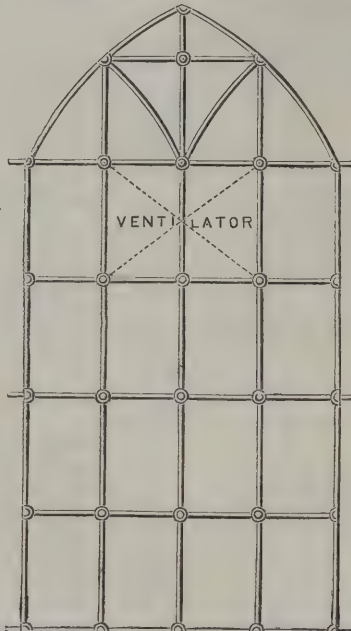
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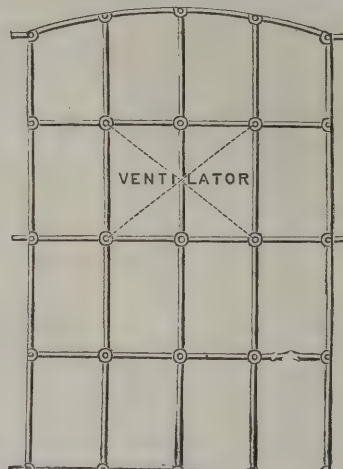
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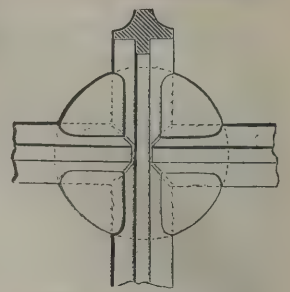
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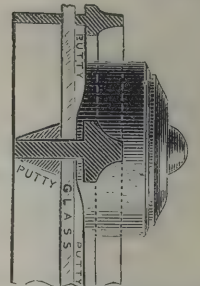
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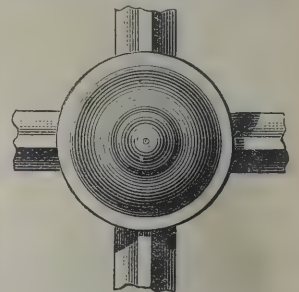
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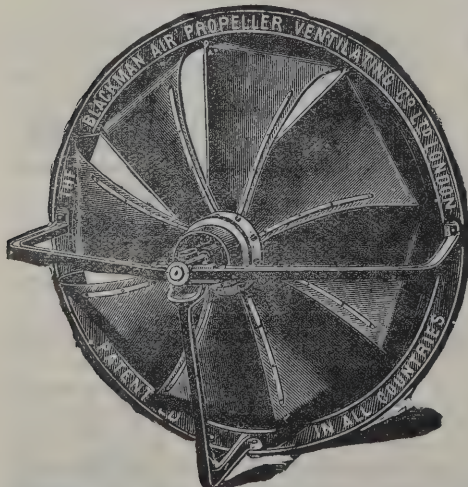
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# The Architect.

## THE CONFERENCE OF ARCHITECTS.



THE holding of an assembly of architects from far and near every two or three years in London has now become an established institution, and one from which a good deal of benefit is, no doubt, to be derived. It is true that the attendance has not hitherto been so large as to accord with the activity of the profession throughout the country; but we may perhaps say with confidence that it is increasing rather than diminishing, and we do not hesitate to express the hope that the meetings which commence next

Monday may be all the better sustained.

Amongst the various subjects which at the present day offer themselves for the consideration of a conference of English, Scotch, and Irish architects, the most important are perhaps such as these:—education, pupilage, diplomas, points of practice, professional etiquette, competitions, artistic and building novelties, and the march of style in design. We propose, in the observations we have now to make, to confine our attention to such questions speculatively, and not in any way to interfere with the programme which has been issued for the actual work of next week, to which, indeed, we therefore need not further refer. Opportunities may arise, of course, for discussing such matters, no one knows how, even if they may seem to be entirely left out of the reckoning, which most of them are.

Education and pupilage are becoming every day of more and more importance in the architectural profession. The existing system at its best turns out rather too many young men rather too carelessly. From the office of professedly high rank in which you may place a lad at a hundred a year for as many or as few years as you please, taking him away when he is tired of it without a "Thank-ye" on either side, to the office of low rank or no rank—except perhaps in the dreamland of competition—where the youngster pays what he must; but as little as possible, and makes the best of it for three years or so, in learning the art of attractive drawing, tinting, hatching, sketching, lettering, and otherwise generally tickling double elephant to distraction, there seems to be pouring forth year after year an increasing stream of more or less smart and clever draughtsmen, concerning whom the question is being asked more and more earnestly and, indeed, urgently every day, What is to become of them all? To supplement a system of pupilage such as this, pointing either to an ever straitening press of rivalry or to a greatly expanding world of employment, the further scheme of education which we possess is not so easily described. No college as yet anywhere, nor even schools; scarcely even drawing-classes; South Kensington said to be woefully indolent in teaching; the Royal Academy class, admirable as it is, and most generously administered, palpably inadequate for so large a purpose; the Institute giving no sign of similar endeavour, and scarcely deserving of more than commendation for goodwill in rewards; the juvenile "Association" trying to fill in the gaps with classes of its own, and finding them but too thinly attended; this is the situation at headquarters in London. And in the provinces what? Little else than a struggle of diligence under difficulties, with the help of journalistic engravings and a few books, and a determination to get up to London some day. It is almost enough to ask how far this is sufficient for the training of English architects for the next generation, whose work may be so much greater probably than that of the present. The question ought to be answered.

Diplomas are in a very awkward way coming at last to something like a hearing. The examination of the Associates of the Institute is a bold experiment; and the extension of the test to the Fellows will be a bolder one still, if it is to be really tried. Why should we not start an examination also for amateurs? Speaking quite seriously, it is by no means so improbable a thing as some might suppose that a considerable number of valuable allies to the cause of artistic building might be induced to come forward. It would be with a very different aim, of course, from that of the purely honorary and

fictitious Honorary Associates of the Institute, if gentlemen professing a little knowledge of art in general, or a good deal of some one kind of minor or even major art in particular, could be encouraged to apply in this way for academical recognition on the ground of actual merit. The idea is at least worth discussing in the general interest of the public progress of art.

Of points of practice there are never wanting many that require settlement as time passes. The vexed question whether it is *infra dignitate* for country architects to be their own or each other's quantity surveyors is a matter of the kind just now. Again, whether a compromise of the standard commission charges, even in the face of poverty of resources, can be encouraged, or sanctioned, is a problem of the utmost practical moment. Information is continually reaching us of the shifts to which struggling men are driven—happily not so much in London now—in order to secure employment by what tradesmen call undercutting. Competitions, again, we still have always with us; their delusive temptations, their many, many disappointments, and their all too few and meagre rewards when any at all. The movement at present on foot for the introduction of skilled adjudication as a public rule, by a combination of all sorts and conditions of possible and impossible, real and imaginary competitors, is advancing apace; but whether anything effective is ever to come out of all this mere signing of names by the hundred is a serious question for discussion.

Professional etiquette amongst English architects there is virtually none; and some people think the state of things is to grow much worse before it is better. Sooner or later a movement in favour of brotherly dealing within the brotherhood is inevitable. The direct rivalry amongst provincial men is in many towns said to be an exceedingly irksome burden; while in London there are complaints of petty jealousy not at all pleasant to hear. Human nature is human nature; but all the greater the need for little artificial virtues if the great natural vices cannot be otherwise corrected. We may frankly confess to a sly wish that there may be heard at some future conference of architects a good round debate upon the conventionalities of practice here and there, sparing nothing that is unworthy.

A discussion of the artistic novelties of the day might turn out to be a much more complicated and interesting exercise than many of us might be inclined to think. The ancillary arts architectural are many and varied, and it is doubtful whether they do not indeed occupy in the aggregate a larger space in the public view of artistic matters just now than all the varieties together which are in vogue of architecture proper. It is to be regretted, perhaps, that some architectural society of the more private and unostentatious order has not already been established for cultivating the higher harmonies of the constructive and decorative arts as a whole. The masters of the minor arts are no longer mere artificers, but gentlemen carrying a good education as well as a good coat, and we cannot believe that the old awkward exclusiveness of architects is beneficial any longer either to themselves or to the public. There is a notable difference in this respect between the Institute of Architects and the Institution of Civil Engineers; the one admitting all sorts of allies freely, and the other excluding all sorts with a morbid churlishness which carries us back to the days when an architect was as much afraid of being identified with trade as a pretty page of the backstairs might be.

Building novelties are too numerous to be touched upon lightly in the mass; but there are always a few of the choicest and most important of them which are well worth discussing, and it is a pity they are not discussed amongst architects—at the Institute, for example—much more than they are. We have had *ad nauseam* the investigation of what are euphemistically called sanitary appliances, hot-water works, chimney-cowls, cooking-ranges, and other inventions, some being more or less ingenious and useful; but it is surprising to specialists in many instances to observe how very backward many of our working architects seem to be in respect of the understanding and appreciation of really novel qualities of material, processes of workmanship, modes of constructive administration, and articles of modest advancement in the way of the miscellaneous paraphernalia of building. We are overwhelmed with showy lithographs and flooded with expensive circulars, but when do we ever consider seriously the actual progress they indicate?

The march of style in public architectural design is a



subject of the greatest importance to the casual practitioner and of the most pleasing interest to the critical observer. In architecture, more than in any other of the greater arts, there is always to be perceived, by those who can read the language, a certain course of progression, wayward and devious sometimes, and often uncertain and unsteady, but never otherwise than the intelligible effect of intelligible causes, the past producing the present, and the present pointing to the future with inevitable regularity. Ten years ago, who amongst the class of ordinary architectural operators could have supposed that they would all be working now so earnestly in such a mode as the Queen Anne? Ten years hence, what will the same men be working in? And yet it is all set down for them in the book of Fate, which unfolds itself so slowly to some and so swiftly to others. It is time that some effort were made to comprehend this, to work from knowledge and not impulse, and intelligently to prepare for to-morrow instead of dawdling away our short to-day without an object save daily bread, as so many do who are capable of better things.

### THE WATER-COLOUR SOCIETIES.

BOTH the Society and the Institute of Water-Colour Painters opened their summer exhibitions on Monday, and thirteen hundred and eighty-four fresh specimens of what some writers, with infirmity, call "the essentially English art" are placed on view for the season. How many more, submitted to the Council of the Institute, received the discouragement of rejection it boots not to particularise. Even the crudest exhibition goes sure by this time that acceptance and rejection in this or any other gallery does not make or mar a reputation or gauge a painter's merit. We all know too well that the profession of artist, like all professions, is over full; that the picture market, like other markets, is overstocked; also that the average excellence of production has reached a higher mark than in any former years, but that work of the highest quality is still rare. These are truisms in the economy of art, but they are forced upon one in noting, for instance, the aspect of the large galleries of the Water-Colour Institute, now an open exhibition, and mustering not far from eleven hundred pictures. The average are above mediocrity, and show ever increased freshness of observation, especially in the department of landscape genre, and distinctly advanced technical facility; but, on the other hand, we look in vain for any new strength in imaginative design or splendid colour gained by the extension of the space to outsiders. Both open and closed societies have their office; the first offer free field for the first appeal of talent, and encourage width of artistic range in style, subject, and thought; the function of the second is, or should be, to keep up the standard of recognised worth, while avoiding by all means the unworthy and stultifying vice of cliqueism. The elder Water-Colour Society certainly, in the exhibition now open, justifies its title to fulfil part of its mission, although, through some unaccountable elections made at different times, the even balance of high quality is still indeterminate.

In the Piccadilly galleries we find certain recently-chosen members of the Institute very notable. Mr. WALTER LANGLEY proves by his subject-picture, *Among the Missing—Scene in a Cornish Fishing Village* (275), that he can not only render with vivid reality and emphatic character a given model, but that he can use his models freely and with artistic command in the service of a dramatic motive. There has been a terrible storm at sea; the sky is still full of rain and wind, and fierce gusts blow about the post and telegraph house of the village on the coast, where the people have come down to gather news of the fishing fleet out in the gale. They can hardly stand on the soaking ground for the wind, some of them; but they hang about the place in their weary anxiety, unmindful of the fierce weather. One girl has heard bad news of husband or lover, and is led away by her old mother, hiding her face with her hands in an agony of sorrow that every line of her strong frame reveals. The whole scene is set forth with a pathetic reality, with such touches of suggestive facts as only a true artist knows how to select, and at the same time with a power of composition in the management of many figures and ingenious balance of parts for which one had hardly given Mr. LANGLEY credit. It is a thoroughly honest picture from beginning to end. The technical qualities are sound as the sentiment is true. This artist exhibits other studies, but this is his most important and also by far his best picture.

Mr. CLAUSEN shows his usual vigour in the poetic literalism—if one may call it so—of his scene of rustic labour, *Hoing Turnips* (610). He seems fond of showing how much may be made out of the simplest and least attractive of field-work incidents. Mr. HUSON has a very good landscape on the same lines: *Something Wrong* (628) has happened to the mowing-machine in a hayfield, and gives occasion to set the figures of the farm-people who guide or look on in picturesque attitudes. Mr. HUSON is a distinct and frank draughtsman and painter; perhaps he lacks depth of colour and effect. The American artist, Mr. ABBEY, has the narrative faculty, which is developed in the work of an illustrator—the skilled line, the careful chiaro-oscuro, also a certain lack of colour and inkiness of shadow. *Bible Reading* (1018) in the household of a Puritan settler gives scope for character and suggestive motive. Between the zealous minister, hot over his exhortation, and the girl whose leaning to the world and the flesh shows itself by a wandering eye and the little coquetry of daffodils stuck in her hair and her dress, the various characters of the domestic drama act as links in a well told story.

Certain foreign mannerisms mark the work of a group of artists otherwise unlike in power or style. The clever eastern scenes of ARTHUR MELVILLE, sketches rather than studies, remind us somewhat of the French M. BIDA. The charming little pastorals of M. CAFFIERI (220, 849), with a motive and feeling quite individual, are, in the blottesque prettiness of the execution, like a certain delightful phase in the work of M. HEILBUTH, without his artificiality. The tiny groups of quaint fisher-folk by M. L. MENPES (844) are technically curious, resembling soft ground etching translated into colour. LUDWIG PARSINI, a very useful member, is hailed as one of the clever group of artists who record modern Venetian life; *Passeggio* (927), a lagoon-side promenade, is most clever, sparkling, frivolous, and gay—modern Italy all over, only more learned in management than appears on the surface.

The Institute is most catholic in hospitality, as may be illustrated by contrasting the mediæval eccentricities of Mr. SPENSER STANHOPE, the nerveless semi-classic nudities of Mr. WALTER CRANE, and the third-hand Burne Jones-isms of Mr. R. ROSE, with the deftly-handled wit of Mr. FRANK DADD, the quaint and delicate last century retrospects of Mr. CALDICOTT, or the incisive character groups of Mr. GOW, A.R.A., who has been in Algiers, and sends a little clear study of *Spakis* (370), or Arab soldiers grouped in the white sunshine.

There is nothing fresh to be noted about landscape in the Institute exhibition. The elder Mr. HINE is true and tender as ever in his pictures of the Sussex downs. His son has painted a capital study of *The Floods out at Ely* (360). Mr. THOS. COLLIER paints with unabated freshness sketches of wild common-land and far-reaching distance under rainy skies. Mr. FULLYLOVE is more successful than ever in pleasant dreams of stately gardens, where fountains and statuary are fitting company, and Mr. ELGOOD follows suit. Mr. JOSEPH KNIGHT shows a large and impressive picture of evening glow over marsh lands and river, but his brush work is muzzy and wants character, and his colour relations are not true. We fancy that his touch has lost its way between the practice of the brush and the tools of a mezzotint engraver. Mr. HEMY has made a fresh start, and in a picture of sailors and sea-waves breaks into vigorous and crisp handling, quite unlike his old photographic solidity. Before leaving the gallery we should like to name the clever street scene at *Honfleur* by ARTHUR BELL, and an admirable little sketch of *Towers and Roofs at Rouen* by J. H. LORIMER, taken from a church tower. There is character and a quiet power of selection and omission in both which promise much.

We have said that the elder Water-Colour Society maintains its high position, and at no time has this been more noticeable than now. There is a maturity of style and completeness of work about the drawings in this exhibition which is in marked contrast with the heterogeneous character of the gathering in Piccadilly; of variety, too, an unusual degree. On the figure list we find such opposed excellencies as those of Mr. POYNTER, R.A., in a lovely and learned study of a girl with a violin, *Viola*, and a less admirable *Psyche*, over against the brilliant literalism of Mr. HENSHALL, painting a young girl posed, childlike, askew on a high library chair, holding a book that has set her brain busy with *Thoughts*. Mr. TADEMA, R.A., contributes an ugly Roman girl hanging a wreath up at a *Street Altar*, painted with usual masterly circumstance. Mr. HAAG appeals with certainty of response from a certain



audience in a showy treatment of the picturesque old Bible story of *Eleazar Returning from his Mission* with REBEKAH, the bride for his master's son. In the way of subject genre Mr. CHARLES GREGORY continues to show a ready invention of incident and vivid realism of character both in animate and inanimate nature; but his composition is too busy and disjointed, and there is an amount of glare about his fresh, imitative colouring. Several of his scenes are this year laid in the churchyards of pastoral England, and a chief picture depicts the story of a *Deserter*, alarmed in his happy rustic household by the passage up the village street of his old regiment. Mr. WATERLOW, a recently-elected member, seems inclined to forsake altogether the quiet charm of his early landscape manner, and breaks in *A Ramble on the Cliffs* into a brilliant, rather crude echo of Mr. HOOK's style and subject. Of landscape artists, with whom the figure is important as carrying out the sentiment of the scene, but subordinate in scale and place, Mr. NORTH and Mr. ALFRED FRIPP may be cited as chief. The exquisite drawing called *A Village by the Sea*, by Mr. FRIPP, is full of delicate truths, carried out with infinite pains from end to end of the subject, but kept in such unobtrusive balance as would blind the casual observer to the labour and knowledge involved. Anyone may, however, feel delight in the atmospheric quality of the pure, pale sunshine which suffuses the hill-side; the row of sailors' cottages, with figures chatting here and there; the cobble baskets drying on the grass, the cliff, and lustrous sea. Mr. NORTH has recovered all his charm and strength. The *Maid of the West Country* is as lovely an English idyll as one need desire. The landscapists and sea-painters are at their best this year, with the exception of Mr. ALBERT GOODWIN—Mr. GEORGE TRIPP in a masterly study of cliff on the *West Coast of Sark*, Mr. A. HUNT in a wild scene of sunset and storm clouds over a *Deserted River-bed*, Mr. RIGBY and Mr. THORNE WAITE and Mr. TOM LLOYD in various transcripts of upland and cornfields, Miss MONTALBA in sketchy but delightful reminiscences of Holland, Mr. HENRY MOORE on coast and sea, and finally Mr. FRANCIS POWELL in a large drawing of green dancing sea waves under a *Summer Breeze*, which is consummate in delicate accuracy of drawing of wave and sky and wonderful beauty of atmospheric effect. The drawing is steeped in sunshine, without a sharp contrast of light and dark anywhere, and the sense of space in the perspective levels of sea wave and the over-arching heaven, up which the soft summer clouds fleet, is a victory of interpretive art.

The last elected members are of very different calibre and style. Miss MARY FORSTER, in several drawings of French river scenery under hazy light of morning or noonday, shows refined and close observation and a finesse of execution that is in delicate accord. Mr. ALBERT MOORE contributes two tiny drawings, called respectively *An Alcove* and *An Open Book*, in which he drapes and surrounds with drapery recumbent female figures, for the sole purpose, after his wont, of working out subtle harmonies of tint and balance of lines. In both cases patterned stuffs are used and treated with marvellous skill. Of these two gems of decorative art we prefer the open-book, in which pale cherry colour and a patterned stuff of grey and white glimmers like silver into one another, and take touches of pale yellow and flesh tints into the deftly-poised harmony.

We have not made especial note of Mr. HODSON's capital architectural subjects, chiefly French street views, which are, however, very acceptable in the exhibition. The most striking work shown of this character is a study of a portion of a pier in the *Porch of the Duomo, at Lucca*, by Professor RUSKIN. This is a practical lesson in the mode of studying architectural detail, in its entirety of colour, texture, and form, which cannot be too highly praised; such a record of decorated shaft and bas-relief from the Professor's brush may atone for many a misleading utterance from his mouth.

#### EXHIBITION OF THE WORKS OF FRENCH STUDENTS IN ROME.

By A CORRESPONDENT.

THE exhibition of the works of those French students who have obtained the "Prix de Rome" is always looked forward to with a certain measure of interest. The art works of this year are not more than usually important, but the architectural drawings are exceedingly fine, fully maintaining

the very high standard of former years, if not surpassing it. Nothing could be, in fact, more complete and thorough, both in study and execution, than these excellent works.

M. BLAVETTE has made an exhaustive study of the Pantheon in ground plans and elevations, both as it exists and in restoration, together with the palestra and xystus recently exposed behind the temple. He gives a section of the former with a decorative painting, representing a port or quay with a temple and an altar of NEPTUNE. He has also made a beautiful drawing of an entablature restored, of this building, with dolphins, tridents, and shells in relief. M. GIRAULT has devoted himself to an analytic study of the Arch of TITUS, of which he has given a plan and sections, together with front and lateral elevations. It is surmounted by a bronze figure in a triumphal chariot. M. DEGLANE has detailed study with much care and finish an Ionic column of Pompeii. He has also a restoration of a column from the Temple of MARS the Avenger in the Forum of AUGUSTUS, and a copy of ceiling decoration from the Villa of Papa Giulio. M. ESQUIÉ has bestowed a most thorough and complete study on the so-called Temple of VESTA, which stands near the river. He has also worked out a sculptured garland of fruit and flowers from the Pantheon. All these drawings are executed with the greatest care and skill, exhaustive in study, and models of architectural scholarship.

A few words must suffice for the works of sculpture and painting. M. FAGEL has a charming portrait-bust of a young girl. He has also a relief of *Don Juan in Hell*, which would be better adapted for painting than sculpture. M. POPLIN has a statue, which he calls the *Song of Autumn*, which is rather mannered and theatrical. Perhaps the best work here in sculpture is *Moses* after having slain the Egyptian, by M. LABATUT, which is vigorous and well modelled. Of the paintings the most remarkable is that of M. FOURNIER—the *Son of the Gaul*. A Gaul lies stretched on a battle-field, with a flaming town or village in the background, exposed to a pitiless rain. His wife has thrown herself on the corpse, whilst his son—a youth with a firm and determined look of vengeance in his face—removes the sword from his father's dead hand. M. BRAMTOT's picture represents the departure of TOBIAS from home, his father and mother taking leave of him, whilst his angel-guide stands beside an ass prepared for the journey. One hardly knows what is gained by the exhibition of such slight works as the *Berenice* of M. DOUCET, taken from Poe's ghastly story. Clever as this artist is, there are not here evidences of power sufficient to justify his appearance on grounds so inconsiderable.

#### EXHIBITION OF BUILDING TRADES MATERIALS AND GAS APPARATUS AT BIRMINGHAM.

BINGLEY HALL, Birmingham, is at the present time occupied with the various appliances that help to make up a Building Trades Exhibition, being the third annual display of this character held there. The exhibition was originally promoted, and still remains, under the management of Mr. PHILIP SHRAPNEL, of the Agricultural Hall, whose experience in connection with exhibitions generally has rendered him a director in whom exhibitors can place full confidence. On the present occasion an exhibition of gas appliances for all purposes has been added, which has helped to cause a greatly increased interest to be taken in the undertaking. When, three years since, the first Building Exhibition was inaugurated such a display was an innovation in the Midland metropolis; but so successful was the venture that it was announced for repetition last year, and, having now reached its third birthday, may fairly be looked upon as having taken root in this district. It is now close upon six years since a Gas Exhibition was held in Birmingham, when the authorities gave up the Town Hall for the purpose; and this was one of the first of any importance held. The example was, however, quickly taken up by other towns, particularly those where the gas supply was in the hands of the authorities. And since then there is scarcely a town of any importance that has not indulged in a similar undertaking. Six years in this era of rapid progress is a long time, and in obtaining the assistance of the Birmingham Corporation in carrying out his design Mr. SHRAPNEL has added to the success of the exhibition generally. It was opened on Monday



last by the Mayor (Alderman Cook), supported by a large section of the corporate body, and members of the Gas Committee. After the opening ceremony, the Mayor, the members of the Gas Committee, and several other gentlemen were entertained at luncheon by Mr. SHRAPNEL. After the toast of the Queen had been honoured, Mr. SHRAPNEL proposed the health of the Mayor, and His Worship having responded, proposed the health of Mr. SHRAPNEL. He again spoke of the excellence of the exhibition, and expressed a hope that it would be successful. Mr. SHRAPNEL proposed the Gas Committee, and Councillor POLLOCK, in responding, also spoke of the interesting nature of the exhibition. During the day Messrs. SYNVER & GILMER'S band played a selection of music, and a large number of persons visited the exhibition, which will remain open until the 17th instant.

The rapid strides that gas has made during the last few years as a cooking and heating agent have brought about changes in a commercial aspect of considerable importance to the class of tradesmen embracing ironmongers, gas engineers, and hardware dealers, that in many places have caused "bad blood" to be generated between them and gas companies, or where the gas supply is controlled by the Corporation, with the "ruling powers" also. This has been caused by the gas authorities entering upon the domain of the tradesman and either selling, or letting on hire at a small annual rental, the gas apparatus that hitherto has been supplied to consumers by the local tradesmen. The Birmingham Gas Committee, in whose hands the supply has been for some years, have it appears been anxious to avoid interfering with private enterprise in the matter, and have hitherto held aloof from countenancing this kind of trade, but it is asserted that up to the present time not more than about fifty stoves per year have been sold by the trade. As this for a town like Birmingham and its large district is a very small number, the Gas Committee have serious thoughts of adopting the plan already taken up by many other towns in the direction we have named. Although we are averse to seeing corporate or local bodies entering the lists as competitors with the legitimate tradesman, if the latter cannot or will not dispose of appliances that are both useful and beneficial to a community, they have no right to complain if others more enterprising than themselves take the matter up. It is certain that there is a great demand for gas-stoves of all kinds. As they are of a character that requires no fixing beyond a connection with the nearest gas-pipe, they offer great advantages to a large body of people who are merely tenants, and who, if they can obtain the use of them on favourable terms, will adopt them either as an auxiliary to coal-grates or as a primary addition to their household. By the hire system, a trade that it is desirable to develop will be considerably fostered with its necessary corollaries, a large additional employment of labour.

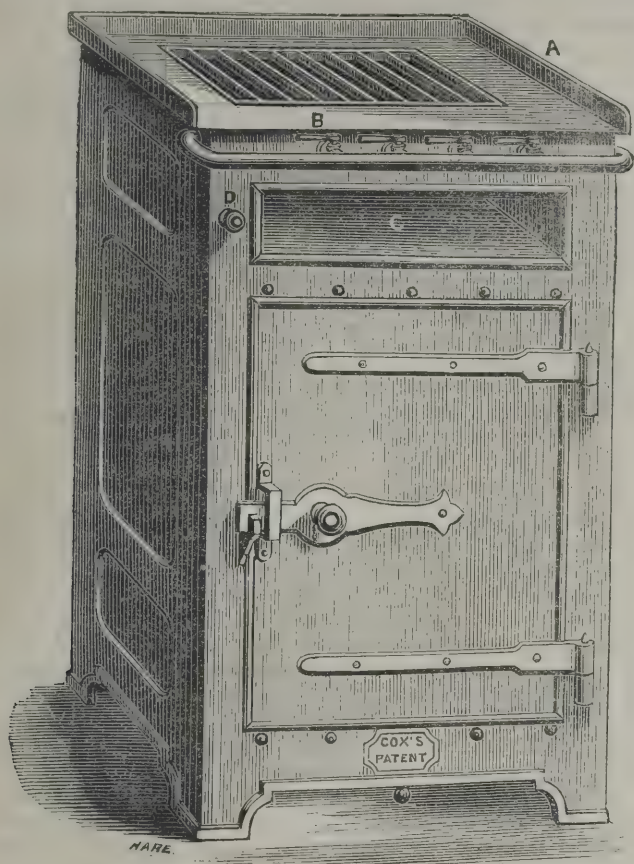
The most attractive stand in the gas section, albeit it is devoted to lighting appliances only, is that of Messrs. GEORGE BRAY & Co., of Leeds. The name of this firm has recently become very popular in connection with street lighting. The original business in which Mr. BRAY was engaged was the manufacture of gas-burners, and in turning out these minute articles the fortunes of the firm have been mainly built up. Considering the length of time these little articles last, but few unacquainted with the demand would imagine that much money could be made by a firm who depended entirely upon them for their income; but Mr. BRAY has made the manufacture of gas-burners almost a science, and it is interesting to look through the many patterns, sizes, &c., that are made for different purposes and various markets. The demand for them is simply enormous. When a few years since a need became apparent for a better system of lighting our public thoroughfares, Mr. SUGG introduced street lamps with argand burners of the power of 500 and 1,000 candles. Mr. BRAY now turned his attention to the manufacture of street lamps of large illuminating power, but proceeded upon a different plan to his metropolitan competitor. His contention was that the argand burner was objectionable because it cast a great shadow underneath, that it must be accompanied by the long vertical chimney, requiring cleaning every day, and liable to breakage at any hour, and that it burnt an unnecessary amount of gas. By means of a specially-constructed lamp, he introduced a cluster of three, five, or even more (according to the amount of candle-power required) flat-flame burners, that is to say, similar ones to those used in our gaseliers at home. At a Gas Exhibition held at Leeds these lamps

were pitted against those with argand burners, and in the large open space outside the Town Hall the "battle of the street lamps" may be said to have been fought out, and in our opinion the argand burner for street lighting purposes received its death-blow, for although for a time they retained a certain position, they have in the main given way to the flat flame burner, which is generally adopted by the few firms who cater for street-lighting lamps. The flat flame lamps cast no shadow, require no chimnies, have on the whole a more pleasing appearance, and we believe burn less gas. Then came the great excitement connected with the inroad of electric lighting, and gas engineers found they had a competitor to deal with that required all their talent and ingenuity to battle with. But, nothing daunted, Mr. BRAY sought the foe wherever he was to be found, and fearlessly threw down the gauntlet, showing himself a foeman worthy of their steel. On two occasions we are acquainted with he obtained a signal success over them. On the occasion of the meeting of the British Association at York in 1881, the Corporation of that city, who were desirous to improve their street-lighting, invited a competition between gas and the electric light, to enable them to come to a conclusion. Without entering into the details of this competition, which was entered into by Mr. BRAY with his improved gas-lamps and the BRUSH COMPANY with their electric light, the gas was considered to effect the purpose best, both as regards the steadiness and more equal diffusion of light, while the cost was considerably in its favour. Later on in the same year, at a Gas Exhibition held at Aberdeen, at which the SWAN incandescent lamps played a conspicuous part, Mr. BRAY solicited the authorities to allow a competition between gas and electricity in the lighting of the hall in which the exhibition was held. Here, again, gas scored a decided triumph; so that with both "Arc" and incandescent lamps BRAY & Co. proved themselves equal to the occasion. We are prepared to make all allowances for the incomplete state of the electric lighting industry at that time, but we allude to the matter more to show the pertinacity of one firm; and if electric lighting becomes general in future, electricians will find this firm opposing them inch by inch; and if they are to collapse they will die hard. The various lanterns manufactured by the firm are exhibited here, including a special pattern designed by Mr. CHARLES HUNT, gas engineer to the Birmingham Corporation, and used in their principal public thoroughfares, called the Birmingham pattern globe lantern, of 100 candle-power, a pretty colonnade lamp of 80 candle-power, and a patent works lantern of the same power, designed especially for manufactories—all made on the firm's patent principle; and a mammoth lantern named BRAY'S 2,000 candle-power cluster, constructed on Mr. GEO. BRAY'S mode of grouping flat-flame burners invented by him in 1879. Several of the special burners made by the firm are shown alight, in connection with a choice selection of globes and shades, for the purpose of illustrating the different effects produced in gas lighting by the peculiar make of a burner, and the exhibit as a whole is of a most interesting character.

In heating and cooking gas-stoves the greatest novelty exhibited emanates from Messrs. BEYNON & COX, of the Torbay Iron Works, Torquay, whose patented principle of heating by gas, without allowing its presence in the oven or cooking-chamber, appeals to the prejudices of those who have hitherto been averse to use gas for cooking purposes from a fear of taint pervading the viands. Without stopping to discuss this question, there is no doubt the firm have accomplished much by their invention. The gas-burners in an ordinary-sized cooker amount only to four of the ordinary character, and only two of these are necessary in some instances. They are burnt in a metal chimney or furnace, and from thence the heat is carried around the oven similar to that in a coal-fire range. From thence it arrives at the top to a super-heating chamber, where the products are mainly destroyed by the intense heat, and the residue, instead of being allowed to escape at an outlet close to the top of the stove, has to travel down a tube to nearly the bottom, by which time the heat-giving powers are quite exhausted, and leave the stove at a comparative low temperature. The tops of these stoves are fitted with the usual boiling arrangements, and a more perfect and innocuous cooking-stove it would be difficult to procure. Admirably arranged stoves of a most compact character, including boiling and steaming appliances, by which a dinner, including pastry, may be cooked for a dozen persons, and of a size so small that were we not certain of the fact we should



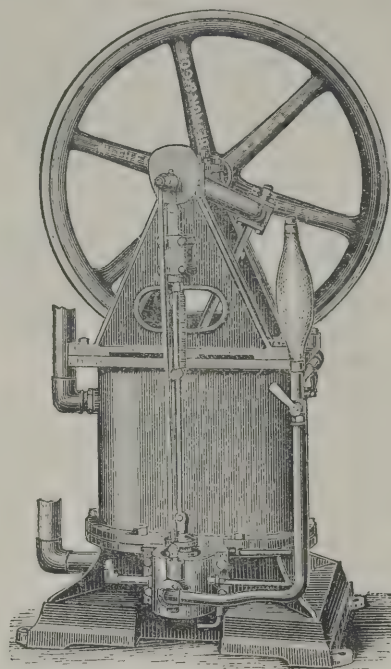
scarcely feel justified in announcing it, are also shown, and grills intended for "early train" breakfasts, boiling the kettle and cooking bacon, chops, &c., at the same time, large enough also for materfamilias, if the family is small, having her luncheon cooked at the appointed time, including roast and boiled with vegetables. The heating and ventilating stoves made by this firm, and based upon a somewhat similar arrangement, have secured a large amount of public favour. We append an illustration of one in elevation, and the principle



may be described as follows:—The burners are the same as in the cooking-stove, and the heat circulates through the entire area of the body, with the exception of a space occupied by a series of tubes about one and a quarter inches diameter, which are fixed in the centre. An opening near the bottom of the stove is provided to receive fresh air from the outer atmosphere. This must be effected by carrying a pipe from the nearest opening. The air, on entering, is received in a chamber at the lower part, where it becomes heated. It then passes up the tubes before mentioned, all of which are in a highly heated state by being fixed in the centre of the chamber in which the heated gas is present, and is discharged into the building at a genially heated temperature. In the stove illustrated as much as 5,000 cubic feet of fresh warmed air is emitted per hour. At the Smoke Abatement Exhibition both the heating and cooking stoves received silver medals, the highest awards granted in their classes; and in a special cooking test, wherein it was sought to gauge the value of differently constructed gas-stoves as to their effect upon meat cooked in them, the joint roasted in Messrs. BEYNON & COX'S stove was found to be fresh long after some of the others had ceased to be eatable. At the International Health Exhibition the firm will exhibit a baker's oven on the same principle as their cooking-stoves, in which bread will be daily baked, and, we are assured, at a cost considerably less than by the present system of heating by coal or coke.

In addition to the above, a gas-engine, which is calculated to make a mark amongst the many now in existence, is also exhibited. We append a sketch of it. A glance will show the working parts to be as simple as possible consistent with efficiency, while the absence of cog-wheels and similar complications reduces its liability to get out of order to a minimum, and friction may be said to be unknown. All the work is accomplished by a single piston valve operated on by a simple cam, which, instead of wire-drawing the charge, instantaneously opens and as instantaneously closes the port through which the

explosive mixture is injected, thus insuring a full charge. Another very important quality in this engine, and not possessed by many small-power engines, is its very regular motion, a desirable attainment for most purposes, but absolutely essential for the generation of electricity. This result is brought about by an explosion being made to take place at every revolution, instead



of only once in two or three revolutions. This clearly shows that in the former case the force of each revolution is thoroughly uniform, whereas, in the latter, it is obvious that it will be alternately weak and strong. There is never any difficulty in starting the WITHERS' engine, which can be set going at any time in ten seconds, while from its extreme simplicity it can be taken to pieces for cleaning, and put together again by any labourer in a quarter of an hour.

Messrs. J. WRIGHT & Co. send an assortment of their numerous pattern stoves, comprising boiling, laundry, tailor's, cooking, heating, and other varieties. Messrs. ARDEN, HILL & Co., of Constitution Hill, are another firm who make a large and comprehensive display, while less cannot be said of the collection brought together by Messrs. SIDDAWAY & SONS, West Bromwich.

Gas-engines are also shown by Messrs. CROSSLEY BROS., Messrs. J. E. H. ANDREW & Co., Messrs. PIERCY & Co., and other local firms; while last, but not least, in this division must be mentioned the DOWSON ECONOMICAL GAS COMPANY, Limited, 3 Great Queen Street, Westminster, S.W. The object of this company in producing the apparatus patented by them is to provide a gas for industrial purposes, such as driving gas-engines, heating, cooking, &c., at a cost considerably less than ordinary coal-gas. So effectively do they attain this object that the testing engineer of the Smoke Abatement Exhibition certified that there was a saving of 50 per cent. by using Dowson gas. Improved meters, regulators, burners, and other minor fittings, complete the exhibits in this class.

Building stone is not altogether absent from the exhibition, and it is satisfactory to note that what is shown is of no common quality, and so far compensates for the lack of quantity of exhibitors in this section. We refer especially to the sample sent by Messrs. STONE BROS., Bath, which comprises the following varieties:—Coombe Down, a good weather stone of light colour, free from soft yellow beds, and one that may be used with safety at any season of the year, however exposed the situation may be, and will always look well. Box ground is another fine weather stone, but of a warmer tint. Stoke ground is regular in texture and may be advantageously used either for external or inside work, and from its depth of bed, which reaches 6 feet, is also very economical. Farleigh Down is much softer than the other kind, and is generally of a rich yellow tinge, but a variety known as the "brown" or "red bed" may also be had—it is not recommended for external plinths, string courses, copings, &c. Corsham Down is a similar stone to the latter, but not so soft, and of a very light colour, which gives it a most effective



appearance. Lastly comes the variety known as Corn-grit, which is a very strong stone especially adapted for bearing great strains.

Messrs. STONE BROS. send a considerable quantity of their different varieties to Birmingham; and amongst other buildings for which it has been used may be mentioned the General Post Office, the Great Western Arcade, the New Arcade in Corporation Street, the Stork Hotel, the new Hagley Road chapel, a new church in Icknield Port Road, and many others of less public importance. They have also supplied upwards of 80,000 cubic feet for Baron ROTHSCHILD'S new mansion at Halton, recently completed by Messrs. CUBITT & CO.

The well-known Staffordshire blue bricks and kindred articles also made from the almost adamant material are well displayed by Messrs. WOOD & IVERY, Limited, Albion Blue Brick and Tile Works, West Bromwich. The varieties of kerbings and pavings so largely and advantageously used in the district are shown in several patterns. Finials, copings, string-courses, and other architectural dressings make a goodly show, and the quarries, garden tiles, and minor articles acquit themselves to advantage, leaving little to be desired as regards either finish or design.

Messrs. HARRIS & PEARSON, Stourbridge, have a very useful exhibit of fire-clay goods, glazed bricks and tiles, Staffordshire bricks, sanitary pipes, and allied appliances. It is for the first-named class of goods that the firm have secured so excellent a reputation, and for gas retorts, glass-house pots, crucibles, and other vessels requiring to withstand intense heats their quality cannot be excelled. The firm are also patentees of boiler seating-blocks, flue covers, and bricks with studs for covering upper surfaces of boilers. The last possess important features, conspicuous among which is that they form a hot-air chamber over the boiler, and are a most reliable non-conducting and weatherproof protection; they are equally indestructible, and are at once safe and neat. The saving of fuel is consequently considerable, and is estimated by Messrs. HARRIS & PEARSON at one-third. Another firm who help to swell the exhibits of building material proper is Messrs. JOSEPH KING & CO., of Netherend and Cradley Park Collieries, and Blue Brick Works, Stourbridge. Like other firms in the district, one of the largest branches of their business is the Staffordshire blue brick, and besides the common stocks, quarries, tiles, &c., they show it as a facing brick in some well-designed ornamental and moulded patterns. White facing bricks, glazed bricks, red and buff terra-cotta work, string courses, terra-cotta vases, &c., are also displayed in considerable variety, the finish and design of which do the firm great credit.

Considering that Birmingham is the very home and centre of the brassfounding industry, the entries are certainly meagre in this division; though, as we have remarked in speaking of other classes, what is shown is of excellent quality and such as will demonstrate to the uninitiated that this branch of manufactures still exists in the Midland metropolis, and that the infinite variety of purposes, both useful and ornamental, for which brass work is used, has by no means diminished.

Messrs. WILLIAMS BROS. & CO., brassfounders and tube manufacturers, Pershore Street, Birmingham, have admirably exemplified this fact, and their stand may be studied by any one with great benefit. It consists of a square glass case constructed with metallic sash bars and with brass pillars at the corners, as used in high-class shop fronts. Each side is very tastefully fitted with an assortment of the different branches of their business. In one are shown brass, brass cased, copper, steel, and iron tubes, in plain, taper, twisted, and fancy ornamental patterns, such as are used in the manufacture of bedsteads, chandeliers, &c. In another are to be seen a variety of stair-rods, picture-rods, brass beading, railings for pews, desks, &c.; in the others are respectively door pulls and door furniture, and all kinds of window fittings and fancy brassfoundry for cabinet-makers, house and church decoration, shipwork, &c.

Mr. C. CARR, bellfounder, the Woodlands Bell and Brass Foundry, Grove Lane, Smethwick, sends a very fair collection of goods, which are, though, of a heavier class than those referred to above, and comprise bells, stair-treads, mill brasses, &c. They also show a variety of articles made of the alloy known as phosphor bronze, a metal that is daily coming more and more into favour. Mr. CARR exhibits specially-constructed crucible melting furnaces for gold, silver, gun-metal, &c., that are said to possess very unique advantages.

Mr. ALEXANDER DICK, of Cannon Street, E.C., is present with samples of his celebrated "Delta" metal, the salient features of which we have pointed out on other occasions in our columns.

Mr. R. RENTON GIBBS, Mill Street, Liverpool, whose patent boilers and hot-water apparatus have gained considerable notoriety, occupies a prominent position near the entrance; and his stand being situated at the end of a row, and facing the avenue on either side as well, enables the articles to be seen to the very best advantage. The Renton-Gibbs patent boiler, set in brickwork, is shown in several sizes, for heating different quantities of hot-water piping. It is very easily managed, and the required heat is soon attained by a minimum consumption of fuel; it is consequently very economical, and is much sought after; so are his patent iron furnaces, which possess equally salient features, and are likewise made in a number of sizes.

Messrs. J. L. BACON & CO., of 34 Upper Gloucester Place, Dorset Square, N.W., also have an interesting exhibit of hot-water heating apparatus. The special, and we may say really unique, features of their system have lately been pointed out in these columns. Our readers are, therefore, familiar with it, but we may mention that the firm were the first to introduce a specially-sized wrought-iron tube for hot-water heating, which has proved to be of such exceptional merit that scarcely anything else is now used, and other makers have readily adopted it. The finish and design of the ornamental coil cases, skirting cases, &c., &c., are quite up to their usual standard.

The BIRMINGHAM SANITARY ASSOCIATION, 28 Upper Priory, make the most important show of sanitary appliances. The chief articles of interest at their stand are:—BOYLE'S self-acting air-pump ventilators, BOYLE'S patent chimney-cowls, BOYLE'S patent smoke-extractor, and a number of the other well-known inventions of Messrs. BOYLE, for which this firm are the district agents; POTT'S patent Edinburgh air-chambered sewer and soil-pipe traps in a variety of sizes; MAIGNEN'S patent Filtre Rapide, and BARRACLOUGH'S patent syphon water-waste preventer. Baths, lavatories, disinfecting apparatus, and a good general assortment of fittings and minor sanitary accessories make this a very complete and attractive exhibit.

In artificial stone, the VICTORIA STONE COMPANY, 283A Kingsland Road, N., carry off the palm, and have sent a representative collection, comprising specimens of paving, railway platform coping, vases, sills, &c.

The BLACKMAN AIR-PROPELLER VENTILATING COMPANY, LIMITED, 57 Fore Street, are the representatives of mechanical means for ventilation, and their appliances, of which we explained the principles in a report upon the late exhibition at Islington, appears to give much interest here, where it is being exhibited for the first time.

The patent metallic and other Venetian blinds, the very artistic festoon and spring-roller blinds, the steel and iron shutters, and school furniture, manufactured by Messrs. HODKINSON & CLARKE, of Small Heath, that recently figured so prominently at the Agricultural Hall, are again shown in all their variety, and are, we understand, to be forwarded to the Health Exhibition, where, it is only fair to say, they will form a very attractive and legitimate feature.

Mr. WM. FISHER, 53 Paradise Street, West Bromwich, and the MIDLAND EDUCATIONAL COMPANY, of New Street, Birmingham, also exhibit very good assortments of school furniture, consisting of improved teacher's desks, seats with reversible back and hat-rail underneath, diagrams, and a variety of the most improved educational appliances.

Mr. HY. BASSANT, 18 Wells Mews, Wells Street, Oxford Street, W., sends his usual creditable display of parquet flooring and borders. Some very choice specimens of teak are among the most noteworthy features on this occasion.

Mosaic decoration, alike for floors, dados, hearths, &c., is contributed by Messrs. DIESPEKER & CO., 40 Holborn Viaduct, E.C., the artistic merit of whose work has lately been the subject of comment in our columns, so that any lengthy remarks would now be superfluous. At the time of our visit their stand was not complete, but according to the description they have entered in the catalogue, their display bids fair to be equal to the one they made at the Building Exhibition at Islington.

Messrs. THOMAS ADAMS & CO., Gloucester and Birmingham, also make a fair show of mosaic work for floors and hearths; and it is satisfactory to note that the furniture con-



tributed by the BIRMINGHAM FURNISHING COMPANY, Colmore Row, is of excellent and original design, and materially adds to the artistic character of the exhibition.

### PARIS NOTES.

ONE of the most curious old buildings in Normandy, the Hôtel du Grand Cerf at Les Andelys-on-the-Seine, is about to be sold. This ancient inn is almost a museum in itself, with its antique cabinet, old crockery ware, enormous wrought-iron kitchen fire-dogs (unique of their kind), and curiosities of every sort. The house formerly gave frequent hospitality to the Primates of Normandy. Antoine de Bourbon, father of Henri IV., died there in 1562 of wounds received at the siege of Rouen. In the last century the house bore the sign of the Fleur de Lys, which was changed at the time of the Revolution for that of Le Grand Cerf. The front of the building dates from the fifteenth century; the panels of the interior staircase are covered with exquisite drawings; in the dining-hall the rafters and wainscoting bear the salamander, the arms of Francis I.; and the vast chimney in the same room is decorated with a sculptured frieze, in which children and animals of fantastic shapes are sporting. Le Grand Cerf is, in fact, one of the show places of Normandy, and has been visited by celebrities of all kinds. Walter Scott in 1827 and Victor Hugo twenty years later made a stay in the curious old inn.

The magnificent Gallo-Roman remains discovered four or five years ago at Sanxay, by the Père de Ste.-Croix, which are especially valuable from the considerable light they throw on the civilisation of the period to which they belong, are likely to be lost to archaeological science, unless prompt action be taken to save them. Three principal buildings were brought to light during the excavations, viz., a temple, theatre, and baths, all of them presenting peculiar arrangements. These finds have, moreover, shown exactly how the great meeting-places were fitted up for the temporary accommodation of the public, on occasion. In order to preserve the valuable ruins, M. Léon Palustre, Director of the French Archaeological Society for the Preservation of Historic Monuments, at Tours, in the department of the Indre-et-Loire, makes an appeal for public subscriptions, with a view to the purchase of the ground and the erection of the necessary buildings to shelter the remains.

The Managing Committee of the group of Independent Artists, consisting chiefly of those whose works have been refused by the Salon juries, have received a letter from M. Stupfler, one of the City of Paris architects, announcing that some of the buildings in the Place du Carrousel will be placed at their disposal free of charge. It has been decided that the exhibition of their works shall open on the 15th inst.

The Association of Painters, Sculptors, Engravers, and Designers, founded by the late Baron Taylor, held its 30th annual meeting on Saturday last, under the presidency of M. du Sommerard, member of the Institute. During the past year 270 new members have joined the Association, and its annual income, which amounted to only 34,000 frs. in 1872, is now considerably more than double that sum.

Preparations are at present being made at Rouen for a National Exhibition of Retrospective Art, under the direction of MM. Alfred Darcel and Andrien de Germiny. The exhibition is projected to last four months, and will include antiquities, paintings, furniture, and works of art of every description appertaining to the Middle Ages, the Renaissance, and the eighteenth century. It will be opened on June 1.

The ten competitors for the Grand Prix de Rome in painting were locked up last week in their respective *loges* at the Ecole des Beaux-Arts, where they have to remain for a period of seventy-two days. The choice of subject for the final competition was entrusted by the Academy of Fine Arts to M. Cabanel, who gave the following:—Lucretia having stabbed herself to death, Brutus withdraws the dagger from the wound, and, holding it up, exclaims, "I swear, and take you for witnesses, oh gods! to extirpate by all means in my power Tarquin and his race, and to suffer no more kings in

Rome!" Collatinus, the husband of Lucretia, Lucretius, her father, and Valerius Publicola are to be depicted as repeating Brutus's oath, and passing suddenly from grief to a passionate desire for vengeance. The result will be declared on Saturday, July 26.

The Committee for the erection of a statue to the late General Chanzy have collected 133,000 frs., including a contribution of 10,000 frs. received from the Department of Fine Arts. The subscription is now closed. It has been decided to erect the statue at Le Mans, the scene of Chanzy's hardest-fought battle towards the close of the Franco-German war.

A number of additions have been recently made to the collection relating to the history of Paris in the Museum at the Hôtel Carnavalet. Among them are some curious sketches by Prudhon, David, and Bailly; pictures of *The Justice of the People pursuing Despotism*, and the *Apotheosis of Marat*; portraits of Robespierre, Mirabeau, Lepelletier, St. Fargeau, and Hoche.

A large covered market is to be built on the outskirts of the new fashionable quarter of Paris, the Plaine Monceau. Two new streets will be made in connection therewith—one starting from the Boulevard Pereire to join the Avenue Wagram, and the other branching off from the first and isolating the southern side of the new market.

A statue to Antoine Watteau, the painter, is to be unveiled at Valenciennes, his native town, on October 10 next. The effigy of the master is being executed by M. Carpeaux, and is destined to surmount a public fountain, the work of M. Hiolle, on the Place Carpeaux. The date chosen for the inauguration corresponds with the bicentenary of Watteau's birth in 1684.

Wood-paving is being most extensively adopted in the French capital. The Municipal Council has just approved plans for laying it down in nineteen more great thoroughfares:—The Rues des Tuileries, de la Paix, de Castiglione, de Médicis, and de Bourgogne; the Boulevards du Palais, Saint-Germain, Saint-Michel, Hausmann, Malesherbes; the Avenues des Gobelins, Friedland, Marigny, d'Antin, and Montaigne; the Places Vendôme, de l'Opéra, de la Concorde, and the Quai d'Orsay.

### METROPOLITAN WATER SUPPLY.

THE following communication from Mr. A. Le Grand, of the Magdala Works, 100 Bunhill Row, E.C., is in reference to a paper by Dr. Percy Frankland, which was read at the Society of Arts:—

From what has transpired in the course of the discussion upon Dr. Frankland's important paper, it would almost appear as though some hold it a condition precedent that water should, as a preliminary stage, be diluted with sewage in order to be subsequently purified by either natural or artificial processes, while others consider that nothing but deep well water is safe to drink; but from whatever source it may be obtained, the common sense desire must be to keep all possible pollution away from it; in other words, if we are compelled to travel along a dangerous road, instead of trying to see how near we can drive to precipices with safety, we should give them the widest berth possible.

I happen to have sunk some hundreds of tube-wells along the banks of the Thames, between Windsor and Gravesend, and have thus become acquainted with the water obtained. Many people are under the impression that because a well is sunk near a river the water drawn from it must of necessity come from the river; whereas, under certain commonly existing conditions, such as a porous subsoil in communication with the adjacent higher ground, the conclusion arrived at is erroneous.

I have met with numerous instances where the present water has been obtained at no great depth, close alongside the Thames, the foulness of which latter as it flowed by needing no analysis to prove it. The fact is, instead of the river supplying the wells in question, the very converse of this frequently is taking place, springs from higher elevations flowing steadily into the river, and thus, in sinking the wells in question, you are simply intercepting the springs which go to swell the volume of the river. I would, therefore, here remark that the analyses of samples of water drawn from the river at various points may lead to erroneous conclusions, if any of the samples in question happen to be taken at spots where these unseen tributaries of pure water are flowing with considerable strength into the river, and thus largely diluting its foul water.



The foregoing facts further point out that, if we are obliged to take the bulk of the London water supply from river sources, it would be far better to intercept the clean underground springs flowing into the Thames, than to take the water after it has been mixed with the many pollutions to which the stream is so liable. The adoption of such a course, while not only securing greater initial purity, would largely, if not entirely, do away with the work of filtration. An experiment in this direction was made upon a somewhat large scale about two years since, at Shrewsbury, where the river is polluted and turbid. Fifteen 3-inch tube-wells, about 22 feet deep, were driven upon a small island, which is at times covered with water; these were connected to one receiver, or main, about a hundred yards long, and yielded a supply of about three-quarters of a million gallons per diem. The quality of this water was rather harder than that of the river, but otherwise it was not only perfectly clear but remarkably pure.

Referring to the theory of purification by atmospheric influence, the following circumstance, which came under my notice a few years back, may be of interest as bearing upon the subject. The water from a more or less polluted river formed the supply of an important town in the north of England, and samples drawn direct from the stream were from time to time sent up to London to be tested by a well-known analyst, so that he was quite familiar with its characteristics. Upon one occasion the engineer caused the water, as drawn from the river, to be forced up into the air in a jet, and falling in a spray was caught and a bottle of it sent up to the analyst. So great was the change effected by this simple process in the direction of purity, that the analyst was with difficulty convinced there had not been a mistake made as to the source from whence the sample was derived.

Dr. Frankland mentions the deep well-water supplies of several towns near the river, and I must say, from my experience of a large number of artesian tube-wells I have sunk in the London basin, ranging from 150 feet to nearly 500 feet deep, the water so obtained is extremely pure and wholesome, and there can be no doubt whatever that such sources (where proper care is taken to exclude surface drainage, to which dug wells are liable) are the most reliable for purity; still, as the case of Ballard *v.* Tomlinson goes to show, ignorance or carelessness may jeopardise such a source, though incidentally I may observe, from an intimate acquaintance with all the facts of this particular case, they have perhaps been magnified much beyond its actual merits; not so, however, with regard to its bearing upon the whole question of the pollution of underground sources of water, which is a subject that unquestionably demands the urgent attention of sanitarians with a view to effective legislation.

It may hardly be generally realised, but it is none the less certain, that deep cesspools are daily being sunk, as the readiest, but none the less most improper, means of getting rid of sewage, not only for isolated dwellings but in populous districts. In some cases these cesspools are dug 50 feet or 60 feet deep, and in others borings are actually made to considerably greater depths for the same object, and I have more than once drawn the attention of the Local Government Board to this practice, which is fraught with much danger to the community at large.

### WOODEN WALLS.

THE traveller who comes from some other county into Hampshire, if he has an eye for traces and survivals of Old England, will, says a correspondent of the *Guardian*, frequently be reminded of the fact that this county has a great claim to be regarded as the original nursery and seed-plot of the nation. When the little nation of Wessex had grown compact on this limited area it soon found that it had an open field of expansion westward among the Weal-kyn, and early began to send out colonies which called themselves Wil-sets, Dor-sets, Sumer-sets. So the nation of Wessex gathered strength and experience, and when the time of trial came it proved to be the only power in England capable of checking the Scandinavian hosts, and of bringing the whole island under one united Government. If we listen to the dialect of the Hampshire folk, we hear a vocalism that asserts the original home of whatever has struck our ear as most salient and characteristic in the tones of Somersetshire, Devonshire, and Cornwall. The names of the places are rich in Saxon elements, and these sometimes hold in fixed combination some British word little found in later English settlements, as in Candever, Micheldever. As the eye examines the landscape we are often struck with the unusual number of yew-trees and their unusual situations. In the country at large yew-trees occur almost exclusively in churchyards; but in Hampshire we find them standing at intervals in the hedgerows of the fields. Their sentinel aspect harmonises well with the reminiscence of ancient boundaries and perambulations (especially of lands owned by the old monastery at Winchester), in which the yew-tree repeatedly occurs as a landmark.

But it is chiefly by certain homely forms of architecture that the early days of our history are recalled among the farmsteads and villages of Hampshire. Farm-buildings and outhouses are still frequently of timber—at least, such is the case on the west

side of the county, in the vale of the Test. Intermixed with some recent structures in brick may be seen ranges of sheds or barns with walls of boards, like the sides of a clinker-built ship. These are, in fact, the original "wooden walls" of Old England, from which the phrase was borrowed as a figure for the floating bulwarks of the navy. In this use it has now served out its time, and discharged its function; but still the original wooden walls are extant, and capable of being recognised. And this sort of building is not altogether confined to the inferior uses already mentioned; there are some highly interesting survivals of it in church architecture. It is possible that our ancestors may have been acquainted with this form of building in their old Continental mother country, but it is hardly likely to have been in general use among them there. The primitive contrivances of wattle and cob would most likely have been their ordinary practice. The more skilful timber architecture they would have learnt in this island from the Romanised Britons. The examination of Roman sites like that of Silchester shows us, that the Roman cities in Britain were of timber, with a low ground wall to rest the framing upon. There were exceptions in favoured localities such as Aquæ Solis (Bath); but the above seems to have been the established local usage which was handed on to the Saxon.

The highest development of this timber architecture was evoked by the fervour of our early Christianity. In the seventh century church building was pushed forward very zealously; and by the tenth century the land was filled with churches almost as thickly as at any subsequent period until the present century, and those churches were for the most part of timber. There were, indeed, certain rare and distinguished examples of stone churches; and these, if inquired into, will be found to belong either to the seventh century (or little after) on the one side, or to the eleventh century on the other. In the seventh century Benedict Biscop fetched masons from Gallia to build his two churches of Wearmouth and Jarrow. These did not stand quite alone; the same hands were employed on other like work elsewhere, and a period of stone church building was the natural result. But its duration was brief, and the art did not take root in the country at that time. It is to this period that the Saxon church at Bradford-on-Avon, to be mentioned presently, has, with good evidence, been assigned. When, after three hundred years, Cnut in 1020 gave orders to build a church at Assandun in Essex, the field of his victory, one of the vernacular chronicles specifies, as a memorable thing, that he ordered a church to be built of stone and lime. These exceptional cases only illustrate the fact that the general church architecture was of timber. It naturally resulted that a form of building which was in general use for several centuries developed some capabilities of being rendered graceful. Extant examples of wooden church architecture show a curious diversity in dealing with the material. At Greensted, near Ongar (Essex), the walls are formed of split trunks of oak-trees, which stand upright, morticed into the sill at the bottom, and let into a groove in the wall-plate at the top. Tongues of oak are let in between the uprights, so as to make the whole firm and weather-tight (P. W. Ray, "History of Greensted Church"). Sometimes the walls are made in large or small panels. The church of Besford (Worcestershire) is quoted as an example of the former, and the south wall of the chancel at Springfield, near Chelmsford, of the latter. In Hampshire there is at Michelmersh, near Romsey, a tower of oak adjoining a stone church of Perpendicular style. This tower corresponds to the description of Blackmore tower in Essex, being built of rudely squared timber of large dimensions, strongly braced together and covered with boards. The weathering of the oak boarding indicates age; but whatever be the actual date of Michelmersh tower, it must be held to represent the tradition of Saxon times. In the neighbourhood of Michelmersh may be seen also some minor traces of the same ancient work. At Timsbury and at Mottisfont are short half-towers or belfries which rise out of the roof at the western extreme of the nave. Such belfries spring from two of the walls of the nave, and they receive their supplementary support from a sub-structure within the church. Occasional examples of this construction may be seen in many parts of the country; instances are Drayton in Oxfordshire, Chipping Ongar, Stanford Rivers, and several others in Essex.

Our data for the timber architecture of Saxon times are not limited to the surviving specimens which are still in the same material. Almost all our extant relics of Saxon architecture in stone betray the hand of builders who were more conversant with timber. The wooden belfries above described may be seen here and there in stone instead of timber. One such is at Swanswick, near Bath, and another in a small country church two or three miles out of Knaresborough. These have long been puzzles to the lovers of church architecture; but the explanation is found in the fact that they are simply traditions of timber translated into stone. It is the masonry of the carpenter. And we may say generally that almost every feature which is known as "Saxon" in our old stone churches is characterised by its timber extraction. The "longs and shorts" to be seen in the quoins of Saxon towers, as in Bennet Church at Cambridge, or in the jambs of Saxon doorways, as at Laughton, in Yorkshire, are to be explained as alternations of wooden uprights and bonding-pieces. The feature which is considered the best proof that a tower is of Saxon date is a belfry



window with a certain peculiar baluster-shaft between the two lights. This baluster-shaft is a work of the lathe, and at first it was turned out of a block of wood. At Bradford-on-Avon there is an entire stone church of the early Saxon times, which has been cleared and recovered from the domestic buildings that crowded and concealed it, by the patient and loving energy of Canon Jones, the vicar of the parish. It is remarkably well built for the time, and probably not without the aid of foreign masons; yet even this fabric reminds us of timber. The Romanesque model from which the builders worked had shallow arcades in the face of the south wall; these have been executed by the craft of the carpenter rather than of the mason. The wall was at first raised with a fair ashlar front, and then the arcades were carved out of the surface, just as any boy who cuts a ship out of a log of deal sinks its upper surface to imitate a deck and bulwarks.

### THE FORTH BRIDGE.

THE following is the fourth quarterly report of the inspection by Major-General Hutchinson, R.E., and Major Marindin, R.E., of the works in progress for the construction of the bridge over the River Forth:—

Steady progress has been made since our last inspection in December. We somewhat deferred the date of the present inspection in order that we might be able to view the excavation for the foundation of the south cantilever pier, the bottom of which excavation has just been reached. The following is a brief description of the present state of the works:—

#### Temporary Works.

*At South Queensferry.*—The most important works consist of the coffer-dams for the south cantilever pier and for No. 7 viaduct pier. The former is composed of two rows of 12-inch sheet piling, with outside struts bearing against the piles, and sustained internally by heavy cross timbers. The dam measures 115 feet by 65 feet inside, and the piles, which average 47 feet long, are driven about 21 feet into the ground. With a view to safety and expedition, the dam has been divided into two halves. The eastern half is completed, the water pumped out, and a trial pit sunk in the centre to ascertain the depth of the hard clay at a depth of 9 feet below the surface and 12 feet below L.W.O.S.T. A compact layer of boulders, averaging 18 inches thick, was reached, and immediately below this the hard boulder clay was entered, which appears to be very stiff and compact. The piles of the western half of the dam are nearly all driven, and it is expected that the water will shortly be pumped out and the excavation commenced. The coffer-dam for No. 7 viaduct pier (the next but two to the south cantilever pier) is being constructed as a half-tide dam; all the timber-work is finished, and the clay puddling is being proceeded with, so that the excavation will be immediately commenced. In the shops and tube roads one of the mandrills has been increased in length to 45 feet to allow of a greater length of tube being drilled without removing the finished plates. Two five-drill travelling machines have been commenced, to drill the box lattice girders which connect the main piers from east to west. One temporary caisson, 61½ feet in diameter and 20 feet in height, is completed, and a second is nearly ready for erection. The Queensferry stage has been carried out to the centre of the main pier, a total length of 1,990 feet, and a T head is now in progress. Jetties have also been erected alongside the coffer-dams of the cantilever pier and No. 7 pier.

*At Inchgarvie.*—A viaduct about 50 feet long has been erected to connect the old brick pier on the island with the site of the north-west pier.

*At North Queensferry.*—The diving-bell, with its traveller and necessary appliances, is now in position at the south-east pier, and work will commence in a few days.

The electric light is now in regular operation on almost all parts of the works. It is to be used for lighting the caissons during the process of sinking.

#### Permanent Works.

*At South Queensferry.*—The masonry of viaduct piers Nos. 3 and 4 has been raised 4½ feet, that of No. 5 5½ feet, and that of No. 6 32 feet. All these four piers, with the exception of No. 6, which is 4½ feet lower, are now 27·85 feet above O.D., at which level they will remain until the erection of the girders is completed. The rivetting of the large caisson for the south-west pier has been carried on continuously, and the shoe and roof of the air-chamber, the most difficult parts of the work, are now finished. The delivery of the caisson for the south-east pier has been commenced.

*At Inchgarvie.*—At the north-east pier the permanent caisson, varying from 3 to 10 feet in depth, has been rivetted up and lowered into position, and the temporary caisson is now being added to it. The construction of the deep caissons for the south-east and south-west piers is well advanced in the South Queensferry shops, and the pontoons to float the caissons into position are now on their way from Belgium.

*At North Queensferry.*—The rock excavation for the caisson at the south-west pier has been retarded by the prevalence of strong

south-westerly winds, but it is now nearly completed. At the south-east pier the diving-bell is now in position. A large amount of boring with diamond drills and blasting has been carried on, and it is expected that the work in the bell will be confined to trenching and levelling the rock to make it suitable to receive the masonry of the pier. The north-west pier has been built up to the level of the under side of the coping, and a two-inch wrought-iron belt, 18 inches deep by 1½ inches thick, is being built into the masonry. The inside of this pier has been lined with blue bricks for a depth of about 8 feet. The excavation for the north-east pier has been completed, the holding-down bolts fixed in position, and the masonry is about being commenced. The north cantilever pier has been carried up 14½ feet, and is now 66 feet above O.D. The south pier of the north abutment has been founded on the hillside, and carried up about 30½ feet.

*Superstructure.*—About 650 tons of steel plates and 380 tons of angle irons and ties have now been delivered. The first of the large tube-drilling machines has been started, and has drilled all the holes in about 20 feet length of tube. About 150 plates, weighing 1½ tons each, have been bent in the hydraulic bending press, and the edges of 100 of these have been planed. A full-sized model of the first skew-back is in progress. The plates composing the lower bed plates for the North Queensferry, north-east, and north-west piers, have been planed, fitted, and drilled; the upper bed plates for these two piers are in progress. The bracing between these piers has been commenced. The first pair of the viaduct girders is expected to be delivered by the end of the month. A testing machine has been erected in the Queensferry shops, in which we witnessed some satisfactory experiments as regards the tensile and compressive strength of cuttings from some of the steel plates. About 96,000 cubic feet of granite have been delivered, of which 64,000 cubic feet have been set, and about 8,000 cubic yards of concrete are now in position. As the result of this our fourth quarterly inspection, we are able to report that the progress and quality of the various works, so far as we are in a position to form a judgment, continue to be satisfactory. The boulder clay upon which the foundation of the south cantilever pier is to be built appears to be, where we saw its surface exposed in the coffer dam, hard and compact, and well adapted for carrying the pier.

### EDINBURGH ARCHITECTURAL ASSOCIATION.

THE members of this Association, under the direction of Mr. G. Washington Browne, paid a visit on Saturday to Dundas Castle, Hallyards Castle, and Kirkliston. The company, numbering about thirty, first drove to the ruins of Hallyards Castle, on the estate of Newliston. The castle, which was built in 1630, is now in a very dilapidated condition, but there are still evidences of its having possessed much architectural beauty in its details, and it is considered a good specimen of a gentleman's residence at that period. The early Gothic features are retained in the moulding of the panel over the doorway, traces of smooth plaster are to be seen on all the walls, and the ends of the joists are still visible in several places. The fireplaces on the principal floor have had richly moulded jambs, but the sleeping apartments do not show the same ornamentation. A deep rent, extending the whole length of one of the gables, points to an inherent weakness in the structure. The company next proceeded to Kirkliston parish church, of which Mr. Browne gave some historical notes. The ancient building is supposed to have been erected about the twelfth century. The church of Liston was in early days of great value, and, along with the village, the mill, and much of the adjacent lands, it was granted to the Bishop of St. Andrews, but at what time was not certain. Liston was at one time a rectory, and was referred to as such at intervals between 1296 and 1409. In 1593 Parliament passed an Act dissolving the parsonage of Kirkliston, and it was attached to Dunfermline till the abolition of Episcopacy in 1690. Tradition says that a family of the name of Liston possessed great property in the neighbourhood, and it was not unlikely that the place took its name from them. At the western end of the church there is one of the earliest saddle-back towers in the country. The building has been considerably altered and added to of late, but care has been taken not to interfere with the old Gothic work. The old Norman doorway, which at one time formed the main entrance to the church, was examined by the party with much interest. Through the kindness of Mr. Jas. Russell, a visit was next paid to old Dundas Castle, the former residence of an historic Scottish family. The building, which is in an excellent state of preservation, is L-shaped, with an irregular square tower on the outer angle. This tower commands a magnificent view of the Forth and the surrounding country, and on its summit a beacon light was placed in olden times. The entrance to the tower is guarded by an ingeniously-constructed iron gate, one of the few of the kind existing in Scotland. Votes of thanks having been given to Mr. Russell, and to Mr. Browne for the instructive manner in which he had pointed out the various features of interest in the different buildings, the company returned to Edinburgh by way of Dalmeny, having spent a most enjoyable afternoon.



## NOTES AND COMMENTS.

THE new church of the Oratorians at South Kensington has given satisfaction to all who have seen it, although much requires to be done to complete the interior and exterior. The building is impressive, and is well arranged for Roman Catholic ritual. Indeed, some ministers of other congregations who have visited the Oratory have expressed a wish that their own buildings were equally capacious. The site has been well utilised, and the church appears larger than was anticipated. By using pilasters of dark Devonshire marble a contrast is afforded, but in the sanctuary they are less effective. That part of the church somehow does not obtain the importance it should possess. The workmanship appears to be excellent, but the tie-rods in the arches and dome are not tokens of strength, although there are too many Italian precedents for them. The treatment of details shows good taste throughout. We are glad to be able to say that the English work is far purer in style than that which is seen in the large altar from a Dominican church in Italy, which has been set up in the Oratory, and is considered to be the most valuable part of the new building. The success of the work augurs well for Mr. GRIBBLE'S career.

THE Arundel Society has at length brought out a complete edition of the large illustrated book on Italian Sepulchral Monuments, which has hitherto been sold only in parts, and without the introductory portion. An historical and critical essay giving a synoptical view of the whole subject had long been promised by the late Mr. G. E. STREET, R.A., but the constant pressure of his professional duties, followed by his untimely death, prevented him from doing more than preparing a collection of notes and rough sketches of monuments as the foundation of his treatise. With the aid of these notes, however, Mr. PERKINS, the author of the two well-known works on Tuscan and other Italian sculpture, has now supplied the promised introduction. The entire publication is divided into seven parts, each containing seven plates in permanent photography, from Mediæval and early Renaissance monuments in Italy, chronologically arranged, with descriptive texts from the pen of the photographer, Mr. STEPHEN THOMPSON.

THE Commissioners who were appointed to inquire into the working of the City Companies have, as was anticipated, arrived at conclusions which will be thought to be revolutionary in the City. The annual value of the property owned by the Companies amounts to about three-quarters of a million, and it is needless to say that all the money is not applied to the public advantage. The dinners and other entertainments are admitted to cost 75,000*l.*, and probably the outlay should be put down at a much larger sum. It is proposed that a Suspension Bill should be introduced into Parliament in order to prevent any alienation of the property of the Companies, and that afterwards the Charity Commissioners or a Special Commission should have control over the funds, which it is suggested should be applied to some object of a Metropolitan character. The present system of introducing members who have no connection with the trade represented by a Company is also to be amended.

FRANCE, like other countries, is suffering from the altered condition of commercial affairs, and, as happens elsewhere, it is considered that there is more need of knowledge among merchants and manufacturers. The French Government have accordingly requested the chambers of commerce to give their opinions as to the desirability of establishing commercial museums in the large ports for the benefit of the commercial and industrial classes at home and abroad. There is such a museum in Bordeaux, which has been in existence for many years. It contains an interesting collection of specimens, both of all raw and manufactured articles, of French trade and of French colonial products, as also of building materials, tools, implements, and various objects connected with the trade, industry, and agriculture of France.

ON Wednesday another attempt was made to amend the irregularities of the copyright law. In the House of Commons Mr. HASTINGS brought in his Bill for the repression of the commission of fraud in the production of works in fine art

and photography, and it was formally read a first time. It must be owned that this year there is less interest taken in the question than was the case formerly, but it does not follow that the Bill on that account will not become law.

THE cost of education under the School Board has given rise to much grumbling in England, but the inhabitants of the islands of Scotland would seem to be even more oppressed by the amount of the impost. In the island of Lewis, which is a poor place, the school-rate amounted at one time to 6*s.* 8*d.* in the pound, although it was contemplated that the rate was not to exceed 3*d.* in the pound. The principal cause is supposed to be the number of new schools which have been erected. In Lewis, of which the total rental is 24,231*l.*, the amount spent in school buildings since 1873 has been 54,549*l.* 13*s.* 7*d.*, of which 33,210*l.* 2*s.* 11*d.* was advanced by Government, at  $\frac{3}{4}$  per cent. interest, payable in fifty years. The balance due on May 15, 1882, was 22,403*l.* 17*s.* 1*d.* One parish, Lochs, with a population of 6,284, and a rental of 4,670*l.*, has expended the sum of 20,311*l.* 17*s.* 2*d.* on twelve school buildings, and still owes 8,983*l.* out of 12,428*l.* advanced by Government. Out of 152 ratepayers in the parish 107 pay rents under 7*l.* In the parish of Harris 14,803*l.* has been expended on school buildings, or more than two years' rental, and in North Uist 9,384*l.* That Scotland is willing to sacrifice much for education has been proved, but it is hardly fair for a Government department to compel the people in a remote island to erect buildings on a scale that is beyond their requirements, and in a style that is exceptionally costly.

THE trade in American timber is no longer confined to the Northern States. The enormous destruction of the pine forests in the North has directed the attention of lumbermen and capitalists to the Southern timber lands, in which money has been largely invested. The port of Mobile is likely to become one of the most important ports for the trade. During the past year the shipments of lumber to foreign ports have amounted to about seventeen million cubic feet of timber, of which three millions were exported to this country. The hewn and sawn timber sent to Great Britain formed three-fourths of the entire quantity that left Mobile. Seeing the success of the South, and in order to put some check on the imprudent destruction of timber in North America, the Canadian authorities have issued a circular which claims that clearings on the dry summit lands, instead of on the lower-lying and richer alluvial soils, causes dried-up springs and flooded valleys, and that covered hill-tops are required for the retention and distribution of moisture, and are worth to the crops produced four or five dollars per acre.

THE new process of staining marble, which the inventor, Dr. HAND-SMITH, calls the Endolithic, has already received approbation from several members of the Royal Academy. At the Piccadilly Hall the applicability of the process is seen in a copy of Mr. BOEHM'S bust of *Carlyle*, in a slab showing a part of Mr. POYNTER'S design for the adornment of the dome of St. Paul's, and in various panels, medallions, dados, tables, tiles, &c. Whether colour should be imparted to marble and stone has been a disputed question. JOHN GIBSON'S splendid figure of *Venus* was, in 1851, considered to be less successful than HIRAM POWER'S *Greek Slave*, because he acted on his belief of Greek practice, and tinted the figure in a delicate colour. Since that time people in this country have had more opportunities of studying sculpture, and with so many Mediæval and Renaissance precedents before them a coloured statue or relief no longer is thought to be as vulgar as it would have been thirty years ago. Coloured sculpture can well be utilised as an element in architectural decoration, the quality of the work depending on the skill of the artist. What Dr. HAND-SMITH claims to have discovered is that he can apply colour in such a way that it is no longer a superficial coating liable to be affected injuriously by time and the atmosphere. By his treatment the material, whether marble or ivory, absorbs the colour to any depth that is desirable, and can be converted into a true endolith, or stone picture, which will endure as long as the substance itself. A design would in this way secure as great a permanence as if it were worked in mosaic, while the new process allows of more fidelity to an original, infinitely better contours, and the cost will be far less than mosaic.







Sketched from Northamptonshire.

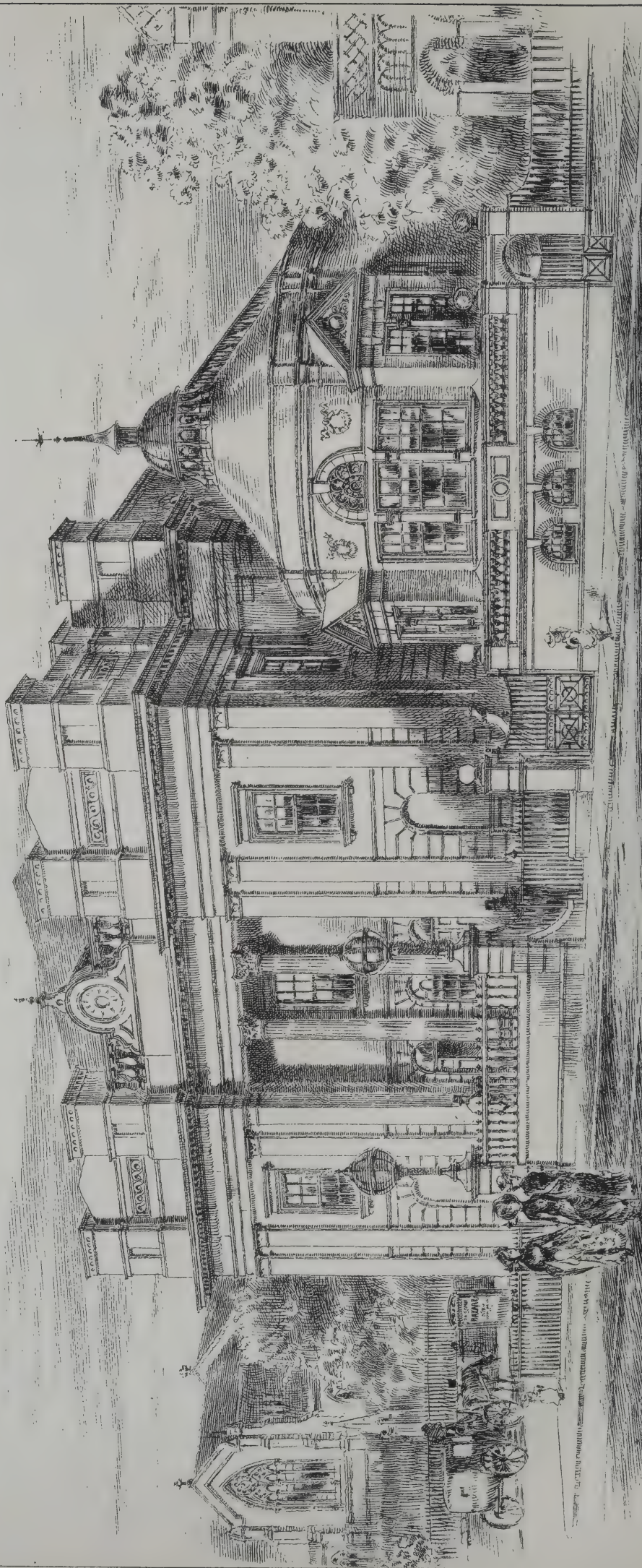








Nottingham Mechanics Institute  
New Reading Room Etc.



Designed by  
Richard K. S. S. S.  
Nottingham









"INK- PHOTO," SPRAGUE & CO., LONDON.





Frank M. Harvey, Del.







The Architect, May 3<sup>rd</sup> 1884.



St. Andrew's Church, Nottingham

PROPOSED EXTENSION

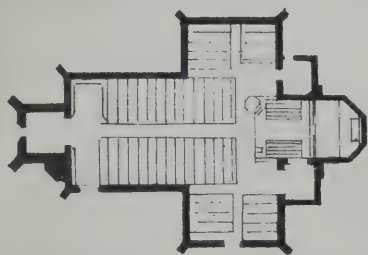
S. R. Stevenson ARCHT  
Victoria St. NOTTINGHAM







New Apse Organ Chamber etc erected  
in Trinity Church Bromley Common.



Chamberlain Leach  
Architect









## ILLUSTRATIONS.

INTERIOR OF THE NEW SHIRE HALL, SHREWSBURY.

THE Shire Hall at Shrewsbury has been lately reopened, after a reconstruction which has been effected according to plans prepared by Mr. T. M. LOCKWOOD, architect, of Chester. We illustrate one of the courts, and it will be seen that, so far as regards the facilities for hearing, every provision is made. The ceiling has been built as low as is consistent with the dignity of the court from an architectural point of view, and is coved down to the walls so as to better reflect the sound from above, and the wall spaces are slightly broken up to prevent echo. The ceiling light is obtained by an extensive and artistic horizontal light of stained glass, level with the ceiling. This mode of lighting, and the arrangement of the corridors on each side, insures the perfect quietude of the courts, and also facilitates ventilation. Below the judge's seat is accommodation for the associates, and in front of this is the solicitors' table. Facing the bench is a double row of conveniently-constructed seats and leather-covered sliding desks, for the use of counsel. Behind these, and in the well of the court, is the dock, which immediately communicates with the cells below by means of a flight of stone steps. Places are here also provided for the governor and deputy-governor of the gaol, and for several warders; and on the other side is accommodation for solicitors in waiting; while behind the dock are three semicircular rows of seats for prosecutors, witnesses, and other persons interested in the cases in progress. In the rear a capacious stone gallery affords accommodation for the public, entrance being effected from a corridor adjoining High Street. The court fittings throughout are of polished oak, while the pilasters, cornices, and upper portion of the inner walls generally are of moulded Parian cement.

Artificial illumination is afforded by means of four sun-burners, each containing sixty-three jets. The sunlights also act as ventilating shafts, and the heat generated by the gas is thus carried off without perceptibly affecting the temperature of the court, which in hot weather is rendered cool by means of a current of air washed and cooled before it enters the courts, by an ingenious contrivance in the shape of a small water-spray. By the use of ice in the cooling-chamber the temperature can be still further reduced.

Convenient access is furnished to the cells in the basement, and therefrom to the docks in each court. The ground-floor accommodation comprises spacious and well-lighted entrance and waiting-halls, rooms for the clerk of the Crown, and waiting-rooms for male and female witnesses. From these waiting-rooms witnesses obtain access to the courts in close proximity to the respective witness-boxes. The jury retiring-rooms, with their offices, &c., are on this floor. In the old portion of the buildings next the front provision is made for the mayor's court and retiring-rooms, which are greater in area than before. In the two upper storeys are offices for the clerk of the peace, county treasurer, and town clerk, with their clerks' offices. The front and side of the old building, which are of Grinshill freestone, are left entirely intact, except so far as regards the necessary repairs and restoration.

The dimensions of the new courts are as follow:—Length, 52 feet; width, 36 feet; height, 34 feet; height of side galleries, 7 feet. The ceiling-light of each court contains eight panes of stained glass, each bearing a coat-of-arms.

The arrangement of the new courts has given general satisfaction to all classes, from the judges to the general public. Baron HUDDLESTON said that all the other counties of England might be fairly challenged to produce more commodious or more convenient courts, and, with the exception of one or two, he did not know of a better in England. At the Quarter Sessions, which were held on April 9, the chairman drew attention to the remarkable circumstance that not a single penny had been expended in extras on the building, the estimated sum of 25,385*l.* having been sufficient.

The general contractor was Mr. SAMUEL WARBURTON, of Manchester. Messrs. DENNETT & INGLE constructed the whole of the floors on their fireproof system. The stained-glass, ceiling, and other lights are by Messrs. SHRIGLEY & HUNT, and the effective internal decoration is by Mr. FRANCIS SMITH, of Chester and London. Mr. J. S. HAM was clerk of works, and Mr. H. ROWLAND the builder's superintendent.

EXTENSION OF ST. ANDREW'S CHURCH, NOTTINGHAM.

THE necessity for additional means of exit, without loss of seat-room, has induced the vicar (Canon TEBBUTT) and churchwardens to extend their church in the manner shown in our illustration. The new doors entering the church, and also the screen folding-doors dividing the new north porch, are all hung folding, and open outwards, so as to avoid draught and allow easy exit in case of necessity.

The western extension gives about one hundred additional sittings, and opens into the nave with two bold arches and centre-clustered columns. The interior effect is excellent, and the acoustic properties considerably improved. The cost was 809*l.*

The contract was undertaken by Mr. F. W. ADCOCK. The architect is Mr. SIDNEY R. STEVENSON, Victoria Street, Nottingham.

NOTTINGHAM MECHANICS' INSTITUTE.—NEW READING-ROOM, ETC.

THE accommodation of the building of this Institute has recently been very much increased by the addition of a commodious new reading-room, 80 feet by 26 feet; store-room (of similar area) in basement; kitchen, 36 feet 6 inches by 19 feet 6 inches, and a complete system of water-closets, lavatories, and urinals.

The new buildings are erected on a long strip of ground, having a frontage of about 30 feet to Milton Street, on which they abut with a semicircular stone front, covered with a green slated roof, surmounted with an open timber dome. The height available was somewhat limited, owing to the existence of important side-lights in the old building. The additions are mainly lighted from above, and RENDEL's patent glazing has been exclusively patronised. The chief contractor is Mr. HENRY VICKERS and the hot-water and sanitary engineers, Messrs. GODDARD & MASSEY, both of Nottingham.

The office of honorary clerk of works was filled by Mr. JAMES GRANGER, who was also a member of the Building Committee. The architect is Mr. SIDNEY R. STEVENSON, Victoria Street, Nottingham.

TRINITY CHURCH, BROMLEY COMMON, KENT.

THIS illustration shows a new apse, organ-chamber, pulpit, choir seats, &c., which have been erected in memory of the late Mr. G. W. NORMAN, by his children and family. The additions, with the exception of the pulpit (carved by Mr. EARP), have been executed by Mr. WILLIAM SMITH, builder, of Bromley, and the stained-glass windows are by Messrs. CLAYTON & BELL. The work has been executed from the designs and under the direction of Mr. C. PEMBERTON LEACH, architect, 31 Spring Gardens, Charing Cross.

SKETCHES IN NORTHAMPTONSHIRE.

THIS illustration is from sketches by Mr. J. BUTLER WILSON, architect, Leeds.

## YORK ARCHITECTURAL ASSOCIATION.

AT the last meeting of the present session of the York Association, Mr. T. R. Dickinson gave a lecture on "Warming and Ventilation of Buildings." The lecturer, after alluding to the importance of the questions, explained the composition of the atmosphere, and showed that, without a due supply of oxygen, life and combustion are impossible. Air once inhaled was not only absolutely unfit for further use, but vitiated a considerable quantity of the surrounding atmosphere. He described several ancient methods of warming rooms, and traced the beginning of the present system of fireplace and smoke-flue. He next noticed the fire-grates and stoves at present in use, pointing out how warming and ventilation may be combined; the different methods of introducing fresh air, either cold or artificially warmed, into a building; the various contrivances for extracting vitiated air; and, finally, the necessity of ventilating stables and similar buildings with as much care as dwelling-houses. A discussion followed, in which Messrs. Shires, Yeoman, Hepper, and Brown took part; and, on the motion of Mr. William Brown, vice-president, seconded by Mr. Geo. Benson, architect, a hearty vote of thanks was accorded to the lecturer, who briefly responded. Mr. B. Priestly Shires announced that the programme for the summer months would this year be a very interesting one. Amongst the places to be visited were Leeds, Ripon, Helmsley, Howden, Whitby, Bridlington,



Castle Howard, &c. With a view to increase the interest of the students and others in sketching, it had been decided to inaugurate a sketch-book, which should bear the name of the Association, and he hoped it would prove a most valuable adjunct to the future prosperity of the society.

### THE CASTELLANI COLLECTION.

THE total sum realised by the Castellani collection at Rome, the sale of which occupied twenty-one days, was about 48,000*l.*, but the total would have been much larger if thirty of the most valuable articles had not been withdrawn in consequence of the high-handed proceedings of the Italian Minister of Public Education. The Italian Government was anxious to buy the whole collection as the nucleus of a new museum similar to that at South Kensington, but not having the necessary funds the Minister, basing his action upon a Papal decree of 1820, claimed the right of pre-emption (*prelazione*) over thirty of the choicest articles. The heirs of Signor Castellani protested against the legality of this and commenced an action in the Civil Courts, but, as this was not likely to be decided for some months, it was resolved to proceed with the sale of the other articles in the catalogue. The sale accordingly commenced at the time appointed in the Palazzo Castellani, transformed for the time into an auction mart, the sale of the antiquities having attracted Mr. Newton from the British Museum, Mr. Fortnum from South Kensington, M. Frohner (the late Conservator of the Louvre, who had prepared the catalogue), and representatives of the Berlin and Lyons Museums. The articles on which the Government had laid an embargo were mostly antiquities, so that the value of this part of the collection was appreciably lessened, but several of the lots fetched very high prices. A vase found in the Santa Maria Church at Capua, and beautifully painted in various colours, fetched 1,000*l.*; and a Greek mirror from Corinth, with bronze frame and figures of Venus and Cupid, 154*l.*; a small statuette of an Etruscan warrior, little more than 4 inches in height, 141*l.*; and a Diana in terra-cotta, of a period little later than that of Pheidias, 280*l.* The terra-cottas which the late Signor Castellani had purchased in Asia Minor realised the highest prices ever known, a figure of Victory, holding a gilt crown and a bouquet of flowers, being sold for 248*l.*, and a Venus recumbent for 240*l.* The gold and silver ornaments were also sold for very high prices. The poignard in copper gilt which Mariette Pasha found encased in the mummy of the Egyptian King Amasis, and which was for some time the property of Prince Jérôme Napoléon, fetched 300*l.*; a single earring, the fellow of which is the property of Baron Edmond de Rothschild, of the oldest Greek style, 652*l.*; an Etruscan bracelet, of parti-coloured glass, with a gold clasp, 160*l.*; two rings engraved with the busts of a woman and a man, 374*l.*; and a marble bust of an Amazon, attributed in the catalogue to the school of Polycletus, 1,080*l.* The sale of the Venice glass, the Italian and Oriental earthenware, the enamels, tapestries, Renaissance bronzes, &c., attracted many more people, and three glasses by Murano fetched 320*l.* apiece. A vase in Gubbio earthenware, attributed to Giorgio Andreoli, was sold for 600*l.*; a cup of the same kind for 668*l.*; a Pesaro bowl for 324*l.*; another from Urbino for 180*l.*, and a Caffagiolo cup for 242*l.*; a dish in Persian earthenware made 240*l.*; a replica upon a small scale of the famous fountain of Giovanni de Bologna, 292*l.*; an eleventh-century bas-relief in ivory, representing Christ and one of the Apostles surrounded by angels, 172*l.*; a powder-flask of the sixteenth century, 156*l.*; a shrine made in the shape of a house and decorated with Limoges enamels of the thirteenth century, 828*l.*; and another larger one, by Raphael Grimaldi, 1,020*l.*, being purchased for the South Kensington Museum. The antique bronzes and other objects which, it was hoped, would have come to London, are to be sold in Paris on May 10 and following days.

### HIGHLAND DWELLINGS.

THE report of the Commission of Inquiry into the condition of the crofters and cottars of the Highlands and islands of Scotland has been published. Among the subjects treated is that of the dwellings of these classes of people. The Commissioners' remarks are as follows:—

Among the various inconveniences which the people of the Highlands and islands suffer in connection with their position as occupiers of land, the one which strikes the stranger as the most deplorable, and which affects the native with the least impatience, is the nature of their dwellings. It is difficult to say how far the crofter or cottar is sensible of the disadvantages attached to the darkness and deprivations of his primitive habitation, or how far this feature in his life is actually prejudicial to his happiness and welfare. In the main his house does not make him unhappy, for he does not complain; it does not make him immoral, for he is above the average standard of morality in his country; it does

not make him unhealthy, for he enjoys an uncommon share of vigour and longevity. Yet no one concerned for the elevation of the Highland people can fail to desire an improvement in this particular; no one can doubt that if they are well-conducted and robust it is in spite of their lodging, and in consequence of counter-acting causes, and that if they enjoyed the benefit of purer and brighter homes they would prosper more. The Highland houses of the poorer sort are divided broadly into two classes—the black houses and the white houses. The black houses present the original type of the country, and they are built by the people themselves; the white houses are lowland cottages of the plainest character, and they are built by the people aided by the proprietors. The black house still predominates in the Western Islands, on the northern and western coasts of the mainland, and perhaps in the central Highlands. These humble dwellings are by no means uniform in character; in the lowest stage there is the sordid hovel, in which horses, cows, and pigs occupy one end of the undivided tenement, while the human inhabitants, accompanied by dogs and poultry, are immersed in obscurity and dirt at the other. When seen in a superior form the Highland cottage, though thatched with grass or heath, floored with clay and built with untempered stones, may yet possess a chimney and a window in the wall, a door unshared by the cattle, a partition between the stall and the lodging, and when kept clean does not offer an unpleasant aspect, animated as it often is by the loom or spinning wheel, by a hospitable welcome, and by kindly faces. The ancient model of Highland habitation may indeed be contemplated with too much indulgence by those whose minds are not duly possessed by considerations of utility and sanitation, for it is associated in fancy with all that is most pleasing and romantic in the manners and history of the people, while in form and colour it is in perfect harmony with the landscape and the shore. The white house may be seen everywhere, but it is most common on the eastern side of the country, and in Orkney and Shetland. It consists of two rooms on the ground, often with a bedcloset between them, and sometimes with garrets in the roof. It has two chimneys in the gables, and windows designed to open and shut; the walls are built with mortar, one end is floored with boards, the other with earth or flags, the partitions and ceilings are of wood and clay roughly put together, the roofing is of boards covered with thatch, or felt daubed with tar, or exceptionally with slates. The white house is not attractive and not picturesque, but it is usually built apart from the byre, and it is tolerably dry, light, and free from smoke. It stands half-way between the original hovel of the Celtic peasant and the comfortable and comely dwelling which the substantial crofter of the future may, we trust, possess. Where this description of house is the joint production of the occupier and the landlord, the stones, the carriage of materials, and all the labour, skilled and unskilled, are usually supplied by the tenant; the lime and wood, sometimes fashioned, sometimes in the rough, are furnished gratuitously by the landlord; slates when required are obtained from the same source, but for these repayment by instalments is in some cases expected. The system of co-operation in house-building varies so much on different estates, and is perhaps modified so much in particular instances, that any attempt to define a general rule must be in some degree deceptive. The same remark applies to compensation awarded to the occupier for his share in the erection of buildings. In the case of the black house, the occupier is permitted to carry away or sell the timbers of the roof, or receives some allowance for them from the proprietor; in the case of the improved dwelling, we have not heard of any liberal system of compensation; the occupier in a great measure labours and spends at his own risk, each case will be dealt with apart, and the amount awarded will depend more on the means and the generosity of the landlord than on the equity of the claim. There is even in the remoter and least advanced parts of the country an unmistakable movement in the direction of improved accommodation, stimulated partly by the encouragements afforded by liberal proprietors, partly owing to increasing intelligence and emulation among the people. To this movement a considerable impetus would, we believe, be imparted by the provisions for improving leases suggested in this report. It would not be possible in this matter to attain definitive results by precipitate and imperative legislation. Proprietors could not possibly undertake the erection of model dwellings and farm offices on small holdings. The occupiers are equally incompetent for the purpose. The cost of a house and steading on a 10*l.* croft which would satisfy the educated expectations of a Government inspector would exceed the capital value of the holding, and the smaller the holding the greater would be the proportionate outlay for the improvement. Under these circumstances, it is evident that the process of amelioration must be prosecuted with deliberation and by mutual assistance, keeping in view the resources at the disposal of the proprietor, and the means, the habits, and the desires of the tenant. Public authority, which is powerless to create by any peremptory proceeding a higher order of dwellings for the Highland poor, is competent to correct abuses which are offensive to the first principles of decency and health. We feel ourselves debarred from making specific recommendations on this subject, in view of the recent appointment of a Special Commission by your Majesty to inquire into the



dwellings of the poor. It is assumed that the commission will, in one form or another, carry its investigations into the Highland districts.

### ARTISTS' BENEVOLENT FUND.

THE seventy-fifth annual dinner of the Artists' Benevolent Fund was held at the Freemasons' Tavern on Saturday evening, Sir Coutts Lindsay, Bart., presiding. A printed report was submitted, showing that during the past year fifty-eight widows and 16 orphans received annuities, amounting in the whole to 1,203*l*. Since the establishment of the Society 46,893*l*. has been distributed in relieving the widows and orphans of artists. The chairman, in giving the toast of the evening, "Prosperity to the Artists' Benevolent Fund," dwelt upon the value of such an institution, and congratulated artists on the rapid advances which of late years their profession had made. Formerly fathers did not care to allow their sons to become painters or sculptors, but now no profession ranked higher. The Society, with its two branches, the Annuity Fund and the Benevolent Fund, showed them the best way of making provision, and he trusted they would be enabled to still further develop interest in the institution, and to enlarge its sphere of usefulness. Mr. Beresford Hope (president) replied, and gave "The Health of the Chairman," who briefly made his acknowledgments. Other toasts, including the healths of the honorary physicians and medical officers, having been given, the proceedings were brought to a close. Subscriptions to the amount of 600*l*. were announced.

### ARCHITECTURE IN AMERICA.\*

THERE is much good building going on at the present moment in this country, as it is hoped will be shown in these papers. If it were quite clearly perceived by the public to be such—that is, if it were more evidently distinguished from the bad work flourishing beside it—there would be less excuse for their preparation. That this bad work does so rankly flourish is by itself sufficient proof of a widespread deficiency in knowledge, since, as I have said, architecture always comes in answer to a distinct call of patronage.

It is instructive to note in this connection the character of our recent architectural work done under Government supervision. As stated in the Treasury report laid before the present Congress, no fewer than twenty-seven Government buildings, many of them vast in size and costliness, have been in process of erection during the year just closed, in almost as many different cities of our land. It is safe to guess from the examples with which we are most familiar that very few of them are sensible structures, not one a really admirable work of art—safe to say that scarce a single building put up under Treasury direction since the days of Mr. Potter's service could, by any stretch of courtesy, be included in a list of our true successes. The various local governments of state and city have a little better record to exhibit; but it will be found that most of the works coming under the general head of "public buildings," which will here be named for praise, while intended, it is true, for public or semi-public use, yet owe their existence to the fortunate instinct of individuals or of private corporations.

There was, as Mr. White has lately shown my readers, a distant time when building as a fine art was in our country the rule and not merely the exception. While our fathers were colonists or very young republicans they built very well—sometimes beautifully, and almost always honestly, intelligently, appropriately, and with a simplicity of aim and manner that was the very reverse of affectation or vulgarity. But the years which lie between their time and ours were dead indeed to art—were characterised at first by a helpless sort of ignorance, and later on by crass vulgarity and barbarous display. It is not necessary to describe these phases in a detailed way, since I am by no means essaying to write a history of American architecture. Every reader who has used his eyes will find in his own memory types of the various sorts of failure we achieved—types which are only interesting now as standards by means of which to gauge the undeniable advance of very recent years. I may say one word, however, with regard to the kind of work that came in fashion soon after that early kind which Mr. White has praised. The remains of the "Classic style" that flourished for so many years—in stone in our large cities, in pine boards and paint and stucco in our smaller towns—have long been pointed out for ridicule even by those who hold no other architectural tenet with distinctness save this as to the ludicrous folly of attempting to fit Greek temple forms to our modern uses and our often cheap materials. Such attempts are no doubt mistaken, and their results are often ludicrous enough. Yet after all the fashion has, I think, been rather unduly be-rated, for it had a certain amount of at least comparative excellence. It proved that its generation admired, if but in a stupid sort of way, the finest architectural style the

world has ever seen. Later on, admiration was transferred to far inferior models, while current methods of adaptation and execution remained quite as stupid and grew still more inartistic. And a poor work following a fine example, though at an immeasurable distance, is better at all events than another work in which execution and ideals are alike despicable and ugly. And be the work poor as it may, there is a dignity and a simplicity about Greek forms which prevent utter barbarism or hideousness of result—which prevent, for one thing, any accent of vulgarity. There are many far worse public buildings in New York than the Custom House on Wall Street. We might easily count up those which are much better, at least from an artistic point of view. And the pillared wooden temple which does duty for church or court-house in the village street is usually a far better thing in itself, and far more agreeable in its testimony to the taste if not to the practical wisdom of its builders than is its later neighbour—a bastard structure with vulgarised reminiscences of many styles and no styles, and much riotous ornamentation in sanded zinc and jig-saw carving.

The ties of this our new world with the old are of such complex sorts that it would be impossible to guess, without inquiring into facts, whence may have come our impulse in any artistic path. Such inquiry will show that in our architecture we have largely followed England, though her example has not been consulted by our painters or our sculptors. England, as is well known, has been through a varied and perplexing architectural experience since the beginning of the century. First, there dawned the Greek revival, instigated chiefly by the publication of Stuart and Revett's "Athens." Then came the Gothic revival, bringing about the famous "battle of the styles" between Classicism in general and Mediævalism in general, and the faction fights (almost as bitter) of the Mediævalists among themselves. Every phase of English Gothic had its exclusive advocates, and there were others, almost as exclusive, who enforced in stone as well as in speech and print the claims of French or Tuscan or Venetian builders as the best models for the modern architect to follow. Then, just when the main battle seemed to have decided itself in favour of Mediævalism, and when the partisans of the triumphant movement seemed to have settled into some sort of agreement among themselves—or at least into such mutual toleration as would let them all live and work in their several ways and insure the advance of the Gothic movement as a whole—just when its teachers and preachers began to draw breath and consider their cause gained for all time to come, began an unexpected reaction among the younger men into a love for late Renaissance work. "Queen Anne" is the term popularly used of this newest style, and may do as well as any other meaningless ticket to label its results when they must be mentioned. But no term could be historically more inexact. The builders of Queen Anne's day—whose influence we see in our own colonial work—discreet, sober, and dignified, even when nothing more, would be the last to accept the paternity of the motley new fashion, which is in truth less English than Dutch, and less "Queen Anne" than a mixture of Jacobean and Georgian manners, and which most rarely counts among its qualities those of discretion, sobriety, and dignity.

All these successive phases in English work were imitated here in more or less faithful and more or less successful ways. Of the Grecian fashion I have already spoken. It reigned for a time as wholly as it did in England, though with variations due to our lesser wealth and our different materials. The Gothic movement, however, was not quite so cordially endorsed on this side of the water as upon the other. English Gothic forms found little favour except for ecclesiastical and collegiate work. It was only the Venetian Gothic which at one time bade fair to be really popular with us. Many important buildings were erected in this style, like Mr. Wight's Academy of Design in New York, and the large structure on the corner of Boylston and Tremont Streets in Boston. In it Mr. Eidlitz designed some of his best work, as, for example, the piano warehouse on the west side of Union Square. Messrs. Potter & Robinson, again, who at one time were the most prominent of our younger architects, have usually preferred this style, and with it have done some excellent work, notably on the Princeton College campus. But none of these buildings especially concern us here. I cannot try to praise everything good that has been done in the past—even in a past which lies close behind us. I can only endeavour to show what is being done to-day in ways that bid fair permanently to influence the development of our art. And Venetian Gothic with us is already, I think, a thing of the past. Isolated examples will continue, very likely, to be built; but it will hardly count any steady adherents among the younger men in whom lie the promise of our future.

The recent "Queen Anne" fashion has been taken up here with much enthusiasm. I cannot speak, except through an acquaintance, with the prints in English journals, of its very latest essays on the parent soil; but it seems to me as if, with all the wildness and folly that have sometimes marked its presence here, we have still been somewhat more sober, if somewhat less ambitious, than our brethren. Both here and there good work, too, has of course been done when the style has been discreetly dealt with. But what our share in them amounts to I can only show in later portions of my commentary.

\* From an article in the *Century* for May.



Just now I would add that, strong as has been the influence of England on our work, it has not been so exclusive as is commonly thought—at least by Englishmen. Much of our best architecture claims a very different parentage. Italian Renaissance examples have directly inspired some of our most important essays, and modern French fashions have evidently dictated the forms of very many others. Domestic work in New York, again, is chiefly founded on the “high stoop” model, which is not English but Dutch; and though this manner of building has scarcely touched either Boston or Philadelphia, it has become largely characteristic of Washington and of our newer Western cities. And the so-called decoration adopted for it, when it deviated from the simplicity of the original Dutch model and evolved the typical “brown-stone front” of New York, is not English, whatever else it may be called. The statement often made by writers in English architectural journals that there is nothing good or bad in America which has not its exact prototype with them, is very wide indeed of the truth. We have been and still are not only far more continental, but far more original in our architecture than we even realise ourselves. To ask how often this originality has been a thing to boast of, is to open up quite another question—a question which would need first of all for its decision the settlement of the time-honoured problem as to whether mistaken originality or the servile copying of good examples is the more promising mood in art. Two things are, however, certain. One is that our real epoch of productivity is but just beginning; and the other is that, whatever its course may be, whether peaceful or distracted, whether resulting in failure or success, it will work itself out on lines of its own—not upon those suggested by the contest still raging on the soil of England.

### THE ROYAL MANCHESTER INSTITUTION.

IN their report to the Governors, which will be presented at the forthcoming annual meeting, the Council state that, in accordance with the resolution passed at the last annual meeting of the Governors, the finances of the Institution have been put into sound condition; the consols having been sold, the debt owing to the bank has been paid off, and out of the balance of proceeds remaining the purchase has been made of 810% of 4½ per cent. debenture stock of the North British Railway Company. Lectures have been delivered during the session by Professor Knight, Mr. Frederick Wedmore, Mr. Harry Quilter, Mr. Richard A. Proctor, F.R.A.S., and Mr. Ernest Pauer. There has been a good attendance at the lectures. The net cost, after payment of all expenses, is estimated at 140%. At the special meeting of Governors, held in October last, the representatives on the Art Gallery Committee of the Corporation were re-elected, no change being made in the constitution of the seven representatives, namely, Mr. Thomas Ashton, Mr. C. J. Galloway, Mr. C. J. Pooley, Mr. C. P. Scott, Mr. R. Smith, Mr. W. A. Turner, and Mr. T. R. Wilkinson. The Council in August last offered a Heywood Prize of ten guineas for the most meritorious work of art produced by a present student of the Manchester School of Art, and a similar prize for the most meritorious work of art produced by a present student of the Manchester Grammar School School of Art, together with the Heywood medal if the works should be deemed of sufficient merit by the Council. These prizes have recently been awarded as under:—Manchester School of Art (ten guineas): to Charles F. Weston, for a full-length drawing from life; a drawing from the antique, by Miss Ethel Ellerby, and a painting of still life, by Miss Florence Carter, were highly commended. Manchester Grammar School School of Art (ten guineas): there being no single work of sufficient merit submitted, the Council decided to recommend the division of the prize between the following:—Study from life, by William Kneen; study from the antique, by William Kneen; design for wall-paper, by William Henry Cowburn.

### THE PROPOSED PARKS RAILWAY.

THE Bill which seeks powers to authorise the Metropolitan Railway Company to make a railway from their Edgware Road Station to King Street, Westminster, passing under Hyde Park, the Green Park, and St. James's Park, and also to provide for the improvement of Parliament Street, came before the Committee of the House of Commons on Tuesday. Mr. Littler, Q.C., on opening the case for the promoters, pointed out that whereas there was ample railway communication by means of the Inner Circle Railway between the east and the west of the metropolis, there was no communication whatever between the north and south, with the exception of the line from Ludgate Hill on to the Metropolitan at Farringdon Street. The street traffic of the metropolis, however, was enormous, and the manner in which it was increasing was shown by the fact that the number of persons carried by the Metropolitan Company had increased from 14,000,000 in the first year of the existence of the line to 74,000,000 last year. Notwithstanding this the street traffic was still in a most congested

state. He described at length the enormous population of the Edgware Road and its district which would be accommodated by the proposed line, and explained that the line would commence with a double curve from the company's existing line at Edgware Road, one branch running eastward towards Edgware Road Station, and the other westward towards the Bishop's Road Station. It would pass by means of a single tunnel down the Edgware Road to the Marble Arch. The depth of the tunnel below the surface would average from 6 feet to 10 feet. Although he believed there were many cellars beneath the footway, none of those would be affected, for the limits of deviation terminated at the edge of the footway. Occasional shafts would be placed in the road, but in no case would they be more than 20 feet wide, which would allow a carriageway on each side of these structures of at least 10 feet. The traffic along the road would in no way be impeded during construction. For the purpose of erecting a station at the Marble Arch it would, unfortunately, be necessary for them to take a couple of houses in Connaught Place which belonged to two members of that House, who strongly objected to the proceeding. They would, however, be amply compensated in the ordinary course, and would receive ten per cent. beyond the actual value of their property. The line then passed through Hyde Park at a considerable depth beneath the surface, and here it would be necessary to proceed by means of cut and cover, but only under such conditions as would satisfy the First Commissioner of Works. There were only two old trees which would be touched by the works, and only about forty-five altogether. From the Marble Arch to the Parliament Street end of the line the work would be effected by means of a double tunnel, in order to facilitate the ventilation of the line. At Albert Gate the line made a slight curve, and they proposed to take a row of low houses with shops for the purpose of making another station. A ventilating shaft would be run up at the back of the station, but it would be so closed in as to be out of view altogether, and would be carried up to a sufficient height to prevent the foul air affecting the inhabitants of the locality. From Albert Gate they would proceed in the same manner as from the Marble Arch to Parliament Street. Wherever it was found necessary to open roadways the work would be done at night and the surface made good by day, so that the traffic should not be impeded. One of the conditions of their obtaining power to go through the parks was that they should purchase on the best terms they could the block of property at Parliament Street, and the proposed works at this point he described as the most interesting portion of the scheme. Parliament Street would be widened to the same width as Whitehall, a much better access from Great George Street to Charles Street would be given than King Street, which would be obliterated, and a new street of about 50 feet wide would be made between and running parallel to Great George Street and Charles Street. Charles Street would be widened also, so that the thoroughfare would be one of 58 feet wide. The proposed station would be placed opposite to the India Office, but it would be surrounded by ornamental buildings in such a manner that it would be altogether out of view.

### THAMES COMMUNICATIONS.\*

BEFORE directing attention to the best sites for crossing the river, it will be well to consider what are the difficulties barring the adoption of the very many ingenious plans that have, from time to time, been brought forward.

Either for a bridge or a tunnel, suitable approaches must be provided, or some mechanical means, by hydraulic or other machinery, adopted for raising and lowering the vehicles passing over. The Snow Hill incline down to the valley of the Fleet is now almost forgotten, since it was bridged by the Holborn Viaduct and its level approaches; but the effect of such a gradient on heavy vehicular traffic can be well studied now at Tower Hill, which should never have been opened to waggon traffic, with a gradient between Thames Street and Tower Street of 1 in 18½ to 1 in 20; but the severity of such an incline can be even better seen at the curved approach from Smithfield down to the metals of the underground railway, well adapted to its locality in one respect, being, as it is, a veritable instrument of torture. The excessive steepness of the incline requires the addition of “leaders” to the teams of the heavily-laden waggons kept there for that special purpose.

This difficulty of approaches was one of the great objections to the high-level Tower bridge promoted by the Metropolitan Board of Works a few years back; and the same objection, in a less degree, tells against a tunnel, as the difference in level would be somewhat less than with a bridge. It was the absence of approaches for vehicular traffic that made Brunel's well-known tunnel at Wapping a dead letter for so many years till it was utilised by the East London Railway; and it was the indifferent, tortuous, and narrow means of access to the ferry erected recently near the same site which made it practically a failure, or at least one of the causes of its shipwreck.

\* From a paper by Mr. J. B. Redman, M.Inst.C.E., read at a meeting of the Society of Arts.



With modern experience and appliances a tunnel under the Thames may be constructed at any spot, but the cost would be very variable, from the great changes in the geological formation along the metropolitan river valley. Brunel's tunnel was mainly in sand and gravel, and so near the river bed that an artificial one was formed by throwing in clay in bags over the crown, and the excavation partly through it was effected by means of Brunel's well-known shield, the alternate compartments of which were pushed forward, after the material in advance of the polling boards had been removed by excavating from within. The frames, all connected at top by shafting, and provided with broad bases or feet, were pushed forward alternately, like (as Brunel used to say), a man's legs in walking.

A large percentage of the material brought into the tunnel from the heading in advance of the shield, was clay with pieces of the bags adhering. This I have frequently seen when periodically measuring up the work with Mr. James Walker (the leader of our profession at that day) under whose certificates the Exchequer Loan Commissioners' advances were made.

This variability of substratum is well illustrated by the various attempts made to cross the river by tunnelling. Early in this century a tunnel was commenced at Gravesend; the large quantities of water met with in the chalk, were, it is said, the cause of the abandonment of the undertaking. Still, at the present time, with our enlarged experience and improved plant and apparatus, such a work is within the limits of possibility, and an Act of Parliament has been obtained for a railway tunnel in the chalk, to connect Gravesend with the county of Essex. Now, when it is remembered that there are from 40 to 60 feet depth of water at low water in Northfleet Reach, upon a chalk bottom, it will be seen how great an undertaking such a work would prove, but still one that is practicable with the boring and air-compressing machinery of the day, at a certain cost.

An Act has been obtained for a tunnel or subway at Woolwich, and the works were commenced, but stopped from the abundance of water met with, mainly in sand and gravel.

In effect in certain portions of its valley, it amounts to attempting to pump the river dry—unless the work is done by pneumatic air—compressing tackle converting the tube or tunnel into one long diving-bell, provided with air-locks at one or each end, or by the dredging of a low water submarine channel, into which sectional lengths or compartments might be lowered, and the fixing all done by divers.

At Greenwich, for instance, a tunnel or subway to Millwall has been advocated in influential quarters; but when we have the broad fact before us that the river-bed, and down to the chalk substratum, is gravel and running sand for fully 100 feet in thickness, some idea of the character of such a work may be formed.

This is no mere theoretical speculation. About forty years back, Frederick Braithwaite, an engineer well known for such works, sank a well at the hospital brewery, then situate within the hospital enclosure, behind the pier, but which has since been removed. So much sand was pumped up in sinking this well that serious settlements of the brewery walls commenced, and the hospital authorities became alarmed and called in additional assistance. The well was ultimately sunk to the chalk.

I had again practical evidence of all this, being called in some years back by the directors of the Greenwich Pier to advise them on the condition of that work, for in carrying out certain works of reparation to the pier and outfall drainage works, and tidal reservoirs for the Ship Hotel drainage, convincing evidence was afforded of the open porous nature of the soil, charged with water, increasing remarkably in volume after rains from the high ground behind.

The remarkable success achieved by Mr. Peter Barlow, with his small iron foot-subway west of the Tower, again shows how fickle are the surroundings of these works, and it has been quoted at times in support of projects whose surroundings are totally different. Mr. Barlow's tube passed through solid blue London clay, very much as a cheese-taster passes through a ripe "Stilton," and was, as the "navvies" say as regards excavation, as "tight as a bottle."

Encouraged by its success, powers were recently sought for a carriage-way tunnel by enlarging the "Tower Subway," and the scheme had well-known responsible supporters, but the mechanical lifts, or at least the disposition of them, wrecked this seemingly taking project, for, on the Middlesex side, a very large area of Great Tower Hill was absorbed, coincident with the frontage of Myers's warehouses, impinging on and rising above the roadway level north-west of the Tower moat, and abutting on what must become a great line of traffic from the end of the new Tower Street across Trinity Square to the Docks. This undoubtedly proved fatal to the project as interfering with its development, besides almost sealing up the approaches to a lofty stack of warehouses and vaults, and taking a large part of the last, in which the late Mr. Myers, the well-known contractor, had invested a fortune. The practical difficulty with mechanical lifts appears to be this—how would a timber wain and long team of horses be accommodated, and such vehicles as sugar-waggons, brewers' drays, &c.? Though the same difficulty, in a minor degree, applies to ferry-boats; but

it really is these exceptional vehicles and teams that would be most likely to avail themselves of a short and practical crossing place.

Proceeding down the river, the first site that presents itself with any reasonable prospect of reaching the arterial lines of traffic on either bank is the Nightingale Lane site, a narrow (only 30 feet including footpaths) and by no means straight road between the boundary walls of the St. Katharine Docks on the west, and the London Docks on the east side, more than a quarter of a mile in length, and leading from Wapping, or Lower East Smithfield, just west of the upper disused Hermitage entrance lock of the London Docks, up to the main entrance gates to the London Docks in Upper East Smithfield. On the Surrey side it would be near Dockhead, Bermondsey, a favourable point for communicating with the main lines of traffic. This is the site chosen for a tunnel by the Metropolitan Board of Works, and if the idea of a bridge between the Tower and St. Katharine's Docks, with connection with the broad main avenue (the Minories), leading up the east side of the City, and connecting with the Aldgate approach into Essex, be abandoned (but not otherwise) it is, all things considered, a favourable site; but it must be remembered that it is only five hundred yards, or about one-third of a mile, lower down than the much-contested site just east of the Tower.

Owing to the insulation of the Wapping neighbourhood by the London Dock basins, there is no convenient site for a tunnel or ferry for three-quarters of a mile further down, until near the site of Brunel's Tunnel, showing his sagacity in its selection; and also near the steam-ferry recently opened, and still more recently closed.

Old Gravel Lane on the north side, leading to Ratcliffe Highway, and the projecting northern bend of the Lower Deptford Road on the Surrey side, might be approached with new inclined streets of approach within a moderate distance, and, either for a tunnel or ferry, the site is a fairly good one. It would also involve passing under the inner lock or cut of the London Docks. By crossing lower down, as proposed by Mr. Dunch, a site might, however, be selected for a vehicular tunnel, avoiding any crossing of dock property, being just east of the London Docks and west of the Surrey Commercial Docks.

Three-quarters of a mile lower, at Ratcliffe Cross, an admirable site for a foot-subway or ferry presents itself from its propinquity to the Stepney Station of the Great Eastern Railway system, and with the neighbourhood surrounding, and interlaced by the Surrey and Commercial Docks, Rotherhithe, our main entrepôt for timber and grain.

Two and a half miles lower we have the Greenwich site (at present a ferry by steamboats); and from  $1\frac{1}{4}$  to 2 miles still lower, the Blackwall and East Greenwich site at Lea Ness, or Blackwall Point. The feasibility of constructing here a carriage-way tunnel, with long approach roads, at an easy gradient for vehicular traffic, has been discussed for many years, from the transparent fact that it is the first site below London Bridge at which such approaches could be attained at anything but a fabulous outlay; and again its claims are great, arising from the fact that, on the north side, the property required from Blackwall Stairs to the East India Dock Road, east of Poplar Church, is of a very inferior character; and, that on the south side, across Bugsby's and Greenwich Marshes, to the Greenwich and Woolwich Road, opposite the workhouse, is almost entirely open land; but unless time be taken by the forelock, this will soon cease, as the promontory has recently been divided by the South Metropolitan Gas Company for a southern Beckton, and the South-Eastern Railway for a now somewhat visionary wet dock.

Mr. W. H. Barlow, F.R.S., the well-known engineer, at the instance of Mr. Richardson, of the Greenwich Board of Works, who has for so long advocated this site, examined and reported on the formation of a carriage-way tunnel for two lines of vehicles and footways as far back as the year 1874. It was urged at the time that here every facility existed for two main north and south arterial thoroughfares parallel to the river, viz., the East India Dock Road on the northern Middlesex side, and the Lower Woolwich Road on the southern Kentish side, presented themselves, which connected, would form a new road or highway between these important home counties; and it was urged that, as a line of new road between the South Metropolitan Gas Company's eastern portion of the East Greenwich peninsula, and that of the South-Eastern East Greenwich Dock project on the western side, had been adopted by these two corporate bodies, the approach to the tunnel might be carried under it. But the necessity again of passing under the entrance locks of such docks appeared to be lost sight of. The land cleared on the north side by the Poplar Board of Works would have been admirably adapted—with a rearranged plan for artisans' buildings—for a north-west line of approach, and the necessary distance would have been afforded for an easy gradient to the eastern side of Poplar churchyard.

Another special feature of this site is that a large proportion of the works would be in clay, which is found at a reasonable depth on either side of the river, and is doubtless continuous under the river bed.

This in effect will prove the touchstone of success as regards



tunnels for vehicular traffic, or smaller subways for foot traffic alone—*i.e.*, whether at the site proposed within reasonable depth clay is met with, or whether it presents only for a great distance below the river bed the alluvium of the river valley covering the London clay. The difference means comparative ease of execution at a reasonable expense, or, on the other hand, a complex and difficult engineering work, at a proportionately enhanced rate of outlay. The question is, in effect, as much a geological one as it is a mechanical study, and the judicious selection of sites—bearing in mind this great variability of the London basin along the line of the river—means the avoidance of excessive expenditure, coupled in some cases with absolute disappointment.

As regards the surcharged traffic over London Bridge, viewed as a separate question, the greatest relief to it would be effected by a bridge between Blackfriars and Southwark Bridges, opposite the eastern side of St. Paul's Churchyard; this I have for some years advocated. It was also proposed by Mr. Bennoch some twenty years back.

Shortly stated its claims are these, *viz.*:—The diversion of the northern traffic to the southward and eastward by avoiding the choked-up City streets. This traffic is quite separate from that flowing over Blackfriars Bridge by Farringdon Street, as it does coming from the higher level of Aldersgate Street and over the Holborn Viaduct, whilst that passing over Blackfriars Bridge is at a level 20 to 30 feet lower, and runs under the Holborn Viaduct. These two north and south streams of traffic are separated from each other by the precipitous Ludgate Hill, with approaches of 1 in 24.

The traffic over a St. Paul's Bridge would be essentially from north and north-west to south and south-east, and would represent a large fraction of what now passes over London Bridge, with a Surrey approach of 1 in 20½ to 1 in 35.

Blackfriars Bridge presents two long gradients from the centre of the bridge, north and south, averaging about 1 in 40, and meeting at the centre of the bridge, a long dead pull on either side.

The St. Paul's north approach, for 500 feet from St. Paul's Churchyard to Queen Victoria Street, would descend southward at 1 in 45; thence for 925 feet, to the centre of the bridge, would be level; and after that, for 1,025 feet, to Great Guildford Street (to be raised 4 feet), would descend southward, at 1 in 40; and for 600 feet in continuation to Southwark Street by Great Guildford Street (widened westward) at the rate of 1 in 300. The combined lengths—bridge 850 feet, north approach 1,000 feet, and south approach 1,200 feet, amount to 3,050 feet, or nearly five-eighths of a mile.

A high-level Tower-bridge and approaches would be about double the length, and the cost would be proportionate; *i.e.* at 87 feet 6 inches above high-water from road surface, inducing the necessity of passing over the railways on each side of the river. The viaducts, as warehouses, would, however, lease well. A Tower-bridge would divert the specially north-east and south-east traffic, and would be a great boon to the manufacturing interest of those quarters, but the great relief to the swollen north and south stream would be afforded by the St. Paul's Bridge.

The patent objection to a high-level Tower bridge and its approaches is the great length, so that a large amount of the lateral riparian traffic—which more especially seeks accommodation—would not reach such distant points as the Whitechapel Road, or the Grange Road, Bermondsey; and, consequently, a large proportion of the traffic from the wharves would still take the present route.

It is this convincing objection that has resuscitated the advocacy of mechanical lifts, but to manipulate such a traffic as that to be expected over such a bridge, with long waggons, and longer teams, must, to say the least, be allowed to present all the elements of a very complicated problem.

The approaches to our above-bridge bridges, are, with the bridges which may be termed low-level, from that fact not of extraordinary length, *viz.*:—

Vauxhall	1,680 feet.	Approaches—1 in 30 to 1 in 46
Westminster	1,703 "	1 in 35 to 1 in 56
Waterloo	2,700 "	1 in 31 to 1 in 42
		(Middlesex side level).
Blackfriars	1,783 "	1 in 32 to 1 in 48
Southwark	1,990 "	1 in 15 to 1 in 40
		(recently improved).
London	1,930 "	1 in 21 to 1 in 100
St. Paul's site	3,050 "	1 in 40 to 1 in 300
Tower high-level site	7,550 "	1 in 40 to 1 in 80

From which it will be seen that the St. Paul's length is only 350 feet greater than Waterloo.

Such are the conditions surrounding what really is a very complex, though, at the same time, an exceedingly popular problem. Will its solution be found in what has been last put forward under authority. Will it attain the "El Dorado?" or, as a *Times* leader put it, is the land of Beulah to be found beneath the Thames at Nightingale Lane—sweet sounding cognomen of a tortuous and narrow thoroughfare. The proposed approach would, however, do away with all this, but an incline of 1 in 25 for over 2,000 feet is

somewhat serious. The steep part of Waterloo Bridge, Surrey approach, at 1 in 31 to 1 in 35 is about half the length. The same remark applies to the steep approaches to the "Iron Bridge" over Bow Creek.

Should powers be obtained for such a work on this site—should it be carried into effect—and, above all, should the traffic be conducted by steep approaches or mechanical lifts without let or hindrance, to the satisfaction of the public; and, above all, to that of contractors for team labour, the tunnel has gained the day, and that at Blackwall may quickly follow.

Pending such a solution, would not the establishment of interim ferries at the sites, or some of them now indicated, be a reasonable concession to what is, no doubt, a pressing public demand—assuming always that such ferries, like the mechanical lifts, are of a nature to avoid the possibility of break down, and of so simple a character that interruption to the traffic would be avoided? This appears to be proposed by the Metropolitan Board of Works at Stepney, Greenwich, and Woolwich.

These remarks are offered as possibly suggestive of discussion to illustrate the bearings of a modern metropolitan want.

It may occur to some minds that a defined plan for overcoming the difficulties surrounding this question might be put forward, but no attempt to do this has been essayed, from the fact that this is purely a metropolitan question, to be dealt with by the authorities who alone have the power of raising the necessary funds from the pockets of the ratepayers, for no toll-bridge or tunnel can be thought of at the present day, though ferries may, perhaps, be expected, as of a more temporary character, and for these, at frequent points, the metropolitan pedestrian would doubtless willingly pay a small toll; but the Metropolitan Board of Works having freed all the toll bridges, it is extremely improbable they will ever attempt to renew or perpetuate so obnoxious an impost for the maintenance of such colossal works as high-level bridges, or deep sub-aqueous tunnels.

I have the opportunity of exhibiting, through the liberality of the authors, various models, showing how diverse has been the treatment of the subject, and the ingenuity brought to play for the solution of the difficult demand for interchange between the river banks without hindrance to navigation.

The Duplex bridge by Mr. Barnett, with an oval double road at the centre, alternately opening so as to have one road open at all times whilst a vessel is passing; the same idea is to be found in the House of Commons report of 1793.

A low-level opening swing bridge, by Mr. George B. Rennie, the leaves of several spans moving simultaneously so as to leave 200 feet free waterway, equal to that between the port tier moorings.

A rolling tray roadway on isolated piers, leaving always a majority of the spans open to navigation, by Mr. George Barclay Bruce, jun.

The Bascule bridge with lifting girders, by Mr. Horace Jones, similar in principle to those met with in the Low Countries, and to be seen on the canvases of the old Flemish painters.

An iron bridge on this principle was erected across the river Ouse for the Hull and Selby Railway, at Selby, in Yorkshire; and one was erected across the north end of the haven of Great Yarmouth—where it joins Breydon Lake—a few years back.

The plan for the high-level Tower bridge, with road surface 100 feet above high water, necessitates passing over the Great Eastern and South-Eastern systems, but the inclined approaches are no longer than had they started from the margins; but the entire length is rendered very great, and the junction with arterial lines of traffic far distant. The same remark applies to the East Greenwich tunnel, and both have been prepared with the object of showing how serious is the question of obtaining convenient and gentle approaches.

An ingenious combination of swing bridge and tunnel has been proposed by Messrs. Kinipple & Morris; this would involve descending from the upper roadway to the lower tunnel surface on one side, and reascending on the other side at periods when the navigable span was open, so that the road traffic would never be interrupted, or the river navigation either. But here, as with the high-level bridge, or with the tunnel, we are met with the same difficulty of accommodating long wains and waggons, and longer teams, on the mechanical lifting trays prepared for their reception, circumscribed, as they would be in this case, by the horizontal sectional area of the two bridge piers.

The various authors of these ingenious designs, who have so liberally lent their models, will doubtless add to the obligation incurred, by explaining *viva voce* what they conceive to be the special merits of their inventions.

It may be added here that Captain Douglas Galton, R.E., and Mr. Armstrong proposed a single and double swing bridge.

An old heathen proverb, *vox populi vox dei*, reverently interpreted the expressed and fulfilled will of the people as providential in character. Is the "Thames Communication" question of this nature? If so, the sooner it is met the better, by a low-level bridge east of the Tower, or a tunnel at Nightingale Lane, nearly opposite Cherry Garden Stairs, names redolent of the past rather than the present, to be followed, say, by a Blackwall tunnel with southern approach across the euphonious "Bugsby's" marshes.





### Competitions Memorial Committee.

SIR,—It will we hope be of some interest to the profession to learn that up to the present time upwards of 1,350 signatures have been received to the undertaking, "not to take part in any public architectural competition unless an assessor or assessors of established reputation are appointed to advise on the designs sent in." We have naturally had several points raised by architects practising throughout the country, in consequence of the Committee's appeal, though they heartily agree with the reform desired; and our object is to ask you to allow us to state the chief of these, and the views of our Committee upon them.

1st. The objection of "trades' unionism" is one which may be urged against all combinations; but without some joint action of this sort no great reform could be carried out.

2nd. The natural fear expressed by some architects, more especially by those out of London, that they may by binding themselves give an undue advantage to those who do not, should, we venture to think, be an additional reason for each individual to join, as without a considerable amount of unanimity, success in the direction we are aiming at cannot be assured; but if this support is given, the public will in a short time find that their best interests are served by complying with so reasonable a requirement.

3rd. It is said by some that they are not interested, as they do not compete. We ask them, however, to aid those who *do*, in removing what has long been felt to be a scandal in the profession.

4th. It is said that competitions decided by professional assessors are not always satisfactory. But even if this be so, it surely goes no way to prove that it is not a considerable step in the right direction.

5th. The Committee have been asked what course we propose to take in reference to the double competition system. We reply that, beyond suggesting that we consider it should not be adopted for work under 20,000*l.*, we think it is beyond our province to express any opinion.

6th. We do not propose to recommend any architect as a professional referee, our duties being confined to sending to promoters of any impending competition the "Suggestions for the Conduct of Architectural Competitions," issued by the Royal Institute of British Architects, and strong recommendations to appoint at once a professional assessor most competent to advise upon the proposed work, and stating the advantages of such a course to the public, and drawing attention at the same time to the list of those who will not compete unless this is done.

Any request made to the Committee for the appointment of an assessor will be referred back to the promoters, with the suggestion that application be made to the President and Council of the Royal Institute of British Architects, or to any well-known architect who would have the confidence of the profession, not necessarily a member of the Royal Institute of British Architects, and who is not competing.

This, Sir, we think, deals with most of the points that have been raised, and, in conclusion, we beg to thank you for the great aid you have rendered to this movement, and express a hope that those who previously signed the memorial and others who have been waiting to have a further expression of our views, will now with as little delay as possible sign the form which has been sent to them, or apply to us for one, which we shall be happy to send, and do whatever else may be in our power.

We may add that we hope to be very materially assisted in our labours by the appointment of local honorary secretaries in all the principal centres throughout the country, many of whom have already agreed to act, and who will place themselves in communication with us and endeavour in all possible ways to promote the desired reform.

We are, Sir, your obedient servants,

(Signed) { HENRY CURREY, Chairman.  
COLE A. ADAMS, } Hon. Secs.  
ASTON WEBB, }

### Conference Meeting of Associates, Royal Institute of British Architects.

SIR,—The Council of the Royal Institute of British Architects having granted the use of the meeting-room, at 9 Conduit Street, for a special meeting of the Associates on Wednesday, May 7, at 4 P.M., as a part of the proceedings of the forthcoming Conference, I should be much obliged if you would allow me to state in your columns that I shall be glad to receive communications from Associates on any subjects of interest to that meeting.

I am, &c.,

G. RICHARDS JULIAN,

Hon. Sec., Associates' Conference Meeting.

8 Delahay Street, Westminster, S.W.

### WORKS IN PROGRESS.

**Parquet Floors.**—Mr. J. F. Ebner's system has been used in several of the new houses at Kensington Court. The cubes are cut from sawn slabs, in such a way as to produce rough edges to form a "key" for the mastic. The system has been lately employed at the following buildings:—Middlesex Hospital extension; Aston Parish Church, Birmingham; two chapels, Tooting Cemetery, for the Lambeth Burial Board; Liberal Club, Charing Cross; Westerham Church, Kent; St. Mary's Church, Dallington, Northampton; Welsh Wesleyan Chapel, City Road; premises in High Holborn, for Mr. G. A. Kino; Priest Hill, Old Windsor; London and Westminster Bank, Brompton Road; Alliance Bank, Regent Street; Nutfield Church; Great Wymondeley Church; Gaslight and Coke Company; Valve House, Horseferry Road; Southover Hall, Ticehurst, Sussex; Royal York Turkish and Electric Baths; residence of the Empress Eugénie.

**Turkish Bath for Horses.**—The Great Northern Railway Company are now erecting a Turkish bath for horses at their Horse Hospital, Totteridge. It consists of three rooms. There is a large wash-room or grooming-room, which leads to the first hot-room or tepidarium, which is at a temperature of 140 to 150 degs. Fahr. From this room the horse, after being thoroughly acclimatised, can if necessary pass on to the hottest room, or calidarium, ranging from 160 to 170 degs. Fahr., and without any turning round can pass on into the grooming and washing-room again. This last room is slightly heated from the two other rooms, and in each are stocks in which the animal can be fastened if required. The heating is done most economically by Constantine's convoluted stove, and thorough ventilation is secured from the large volume of hot air constantly supplied, which passes through the baths, while the vitiated air is drawn off by specially designed outlets. The wash-room is supplied with hot and cold water, which can of course be mixed to any required temperature. It may here be mentioned that Messrs. Pickford & Co., the carriers, have had a similar bath in operation for over eleven years in their Horse Hospital at Finchley. It is in use for three days every week, during which time twenty horses on an average are sent to the bath. It is surprising that there are not more carriers and horse owners who employ the Turkish bath in connection with their establishments.

**Wood Block Floors.**—The improved wood block flooring on Mr. Roger L. Lowe's system has been laid down lately in several new buildings. Among others are the following:—The Cambridge Free Library, the new Drill Hall (Glasgow), Meltham Mills (near Huddersfield), St. Mary's Church (Flint), at Workhouse Infirmary (Chatham), at Grazeley Court (near Reading), Woodhouse (Stanstead, Essex), Hampden House Residential Club (Somerstown), West Cliff Church (Whitby), Wakefield Court House, Werrington Church, Sunday School (Hampstead), school at Cardiff, Vestry (Culvert Darwen), schools at Oxford, houses (Burghill, Charlton Rings, Cheltenham), almshouses at Kendal, Beckett's Hospital (Barnsley), fitting shop (London Road, Manchester). The floors will consist of blocks bedded in patent composition, and laid with close joints on finely-finished concrete. By this means dry rot and loosening are avoided.

### CHURCH BUILDING AND RESTORATION.

**Bagshot.**—A church erected from the designs of Mr. Henry A. Cheers, of Teddington, has been opened. The church is designed in Geometric style, and cruciform in plan, consisting of nave, aisles, north and south transepts, chancel, organ chamber, and choir and clergy vestries.

**Bromsgrove.**—A Wesleyan chapel erected in New Road has been opened. The building has been erected from the designs of Mr. T. J. Yates, architect, Colmore Row, Birmingham. It is a spacious building, with sittings on the floor for 350 persons, and in the gallery for 130—480 in all. There is also a commodious gallery for organ and choir, and in the front there is a spacious porch and bell turret. At the rear are two vestries and a school-room with accommodation for 300 children. The buildings have been erected by Mr. Joseph Tilt, contractor, Bromsgrove, the stone work being executed by Mr. W. Griffin, Bromsgrove. The internal fittings are by Mr. Mead, Sparkbrook, Birmingham.

**Caldmore.**—The memorial-stones of a new Primitive Methodist chapel, Caldmore, have been laid. The building has been designed by Mr. H. E. Lavender, architect, and is being erected by Mr. A. Lynex, Walsall. It is to be of red brick, relieved by moulded strings, pilaster, &c., and will be supplemented with a vestry at the back. The main building will be used both as a chapel and school, and will seat about 150 persons.

**Highbrook.**—The foundation-stone of a new church has been laid at Highbrook, near West Hoathley and Hayward's Heath. The building is designed by Messrs. Carpenter & Ingelow, of Carlton Chambers, Regent Street, and will be in the Early Decorated style. It is to consist of nave, north aisle, chancel, tower and spire, clergy vestry and choir vestry, with a fine porch at the south entrance. The aisle and nave will be divided by an arcade



in three bays, supported by octagonal pillars. The church will be constructed of sandstone, lined with red brick on the inside and finished with stucco. The roof is to be covered with local tiles with crested ridge, and the spire, which is to be of timber, will be covered with oak shingles. There will be traceried windows of a geometrical pattern. The contract price for the building, exclusive of chancel fittings, pulpit, font, and organ, is between 4,000*l.* and 5,000*l.* The builder is Mr. G. Box, of Ardingly, Hayward's Heath, and the clerk of the works is Mr. W. T. Creed.

**Hither Green, Lewisham.**—On Saturday, April 26, the Earl of Dartmouth laid the foundation-stone of the first portion of a new church. The plan of the church is cruciform, with the transepts opening into the choir; extending eastward from the chancel is a morning chapel, which is planned as a church in miniature, with nave, chancel, &c. Owing to the slope of the ground from west to east this morning chapel is so placed that an east window is arranged for in the chancel of the main church. The communication between the church and the morning chapel is by a broad flight of steps from each transept leading into an ante-chapel, and thence into the chapel itself. It has been decided to build this part of the church first, as, by an outlay of about 1,200*l.*, a complete church is provided for a congregation of 300, and to provide similar accommodation by building the chancel and part of the nave three times that sum must be expended. The architect is Mr. Ernest Newton, of Hart Street, Bloomsbury, from whose designs the whole building will be carried out as soon as funds are forthcoming.

**Nelson.**—The foundation-stone of a new Congregational chapel at Nelson has been laid. The chapel will seat about 650 persons, and is expected to cost about 3,000*l.* The building will be a handsome structure, faced with stone. Mr. Fell, of 37 Spring Gardens, Manchester, is the architect.

**Welbourn.**—The parish church of St. Chad, Welbourn, has been reopened after restoration. The building consists of tower and spire, nave, aisles, south porch, and chancel. The tower is the oldest part, and has traces of Early English workmanship. The spire is one of the Decorated period, as also the aisle and lower storey of the nave. The work has been carried out by Mr. S. Sherwin, contractor, Boston, under the direction of Mr. Kirk, architect, Sleaford.

**Wimbledon.**—A new Congregational church was opened at Wimbledon on April 11. The spire is 140 feet in height, and forms a prominent feature in the neighbourhood. The building, which is of Godalming stone facings, with Bath stone dressings, has been erected from a design by Mr. W. D. Church, of 12 South Place, Finsbury. Mr. E. C. Ackermann, of Wimbledon, was the builder, and the cost will be about 6,000*l.*, including extras and fittings.

## NEW BUILDINGS.

**Brighton.**—A block of buildings is now on the point of completion, forming an extension of the Orleans Residential Club. The extensions have been designed in Queen Anne style, and carried out at a cost, including the site, of more than 40,000*l.* The accommodation includes a large billiard-room on the ground floor, a dining-room (general) on the one-pair floor, several private dining and sitting-rooms, smoking-room, reading-rooms, and a large number of bedrooms. The building is arranged on seven floors, the whole of which are reached by a commodious hydraulic passenger lift. There is also a second hydraulic lift for the general service. The exterior, including the bricks, is of terra-cotta, manufactured by the James Terra-cotta Company and by Messrs. Doulton & Co. The architects are Messrs. Lainson & Son, and the building has been erected under their superintendence by Mr. James Barnes, of Brighton.

**Loughton.**—On the extinction of certain ancient rights in Epping Forest, a sum of 7,000*l.* as compensation was awarded to the inhabitants of Loughton. Out of this sum a public hall has just been opened, erected by Mr. Egan, builder, of Buckhurst Hill, whose tender for the job amounted to 2,736*l.* The architect is Mr. Edmond Egan, A.R.I.B.A., of Loughton. The hall is a plain building in the Elizabethan style of architecture. There are two entrances. On the ground floor is a reading-room, a small hall, a library and committee-room, and three rooms for the caretaker, together with lavatories. On the upper floor there is a large assembly-room capable of seating between 400 and 500 persons. The building is of yellow stock bricks, with red brick and terra-cotta dressings. There is a tower over the principal entrance.

**Milford.**—The convalescent hospital erected at Milford, near Stafford, to the memory of the late Sister Dora, of Walsall, has been opened. The building is a plain substantial one of red brick. On the ground floor there is a dormitory for male patients, affording accommodation for seven or eight beds, with lavatory, &c. belonging, general dining-room, matron's parlour, kitchen, scullery, store-room, larder, and other offices. On the upper floor is a ward for seven or eight female patients and children, also with lavatory and other offices; a sitting-room for the female patients, matron's bedroom, two other bedrooms, and linen closet. The building has

been erected at a cost of about 2,000*l.* by Messrs. Treasure & Son, of Shrewsbury, from plans prepared by Mr. E. H. Martineau, architect, of London, who gave his professional services gratuitously.

**Sailors' Home, Leith.**—This building, which has been erected from the designs of Mr. C. S. Johnston, of Edinburgh, is almost complete. The style adopted is Scottish Baronial. The principal frontage measures 90 feet, and is four storeys high, exclusive of attics. The lower is 75 feet high, giving a fine view of the Firth of Forth. The reading-room is 21 feet by 19 feet, the recreation-room 23 feet by 18 feet, the dining-room 32 feet by 18 feet, and the kitchen 22 feet by 18 feet. There are several bedrooms, and four large dormitories. The walls are faced with Polmaise light-brown dressed sandstone, and square-dressed white Harle's rubble. The contractors are Messrs. George Smith & Son. The building will cost 8,600*l.*, exclusive of furniture.

## GENERAL.

**Professor Jebb**, of Glasgow, has been elected a corresponding member of the Berlin Archæological Institute.

**The Art Exhibition at Rugby School** has been closed. The collection of pictures included a series of over seventy works in oil and water-colours by W. Edward Dighton (1822-1853), the pupil and friend of Müller. A series of mosaics in glass and coloured marbles were contributed by Messrs. H. Burke & Co., of London, to the same exhibition.

**The Local Board for the District of Melksham** have appointed Mr. David Mackenzie, C.E., Melksham (Wilts.), as the engineer for the new sewer drains proposed to be laid down in the principal parts of the town.

**Mr. T. Chatfield Clarke** read a paper on "Improved Dwellings for Labourers and Artisans" at the meeting of the Surveyors' Institution on Monday last. There will be a discussion on the subject on next Monday evening.

**The First Prize** in the competition for the Wesleyan church at West Cliff, Scarborough, has been awarded to Messrs. W. J. Morley, of Bradford, and G. H. Woodhouse, of Bolton. Mr. John Hall, of Scarborough, obtained the second prize. There were sixty-four competitors.

**The Windows** on the south side of St. Luke's Church, Torquay, five in number, have been filled with stained glass in memory of Colonel and Lady Laura Meyrick, and Lady Alvanley. Messrs. Heaton, Butler & Bayne, of London, were the artists.

**A Committee** of the Swansea Corporation have decided to select the designs marked "Goreu Doniau Gwybodaeth," "Morganwg," "Utile Dulci," and "Con Amore," subject to the approval of the Council. The President of the Royal Institute of British Architects has been asked to name some architects to examine the four designs, and decide which is the most eligible.

**City and Guilds of London Institute.**—At the meeting of the executive committee of this Institute, held on Monday, the following appointments were made at the Central Institution, Exhibition Road:—To the Professorship of Chemistry, Henry Armstrong, Ph.D., F.R.S., of the Technical College, Finsbury; to the Professorship of Engineering, W. C. Unwin, B.Sc., of the Royal Engineering College, Cooper's Hill; to the Professorship of Mechanics and Mathematics, Olaus Henrici, Ph.D., F.R.S., of University College, London; to the Professorship of Physics, Oliver Lodge, D.Sc., of University College, Liverpool.

**A Lunatic Asylum** on a large scale, to provide for between 800 and 1,000 patients, is proposed to be erected in the Glasgow district. A committee of the Lunacy Board have recommended the erection of blocks to be used for hospital purposes, capable of accommodating between 250 and 300 patients; central buildings, containing everything requisite for the general administration of the whole establishment, and having also accommodation in suitable sized blocks, capable of ultimate extension, to accommodate at least 600 patients—the whole blocks being connected with one another by corridors or covered ways.

**Society of Antiquaries of London.**—On St. George's Day this society held its annual meeting for the purpose of electing its officers for the ensuing year. Lord Carnarvon was re-elected president, and Mr. William Copeland Borlase, M.P., and Mr. William Smith, LL.D., D.C.L., were chosen vice-presidents. Mr. Charles Spencer Perceval, LL.D., was elected treasurer, and Mr. Henry S. Milman, M.A., director. Mr. Charles Knight Watson, M.A., was re-elected secretary.

**A Bill** to authorise the construction of an electric railway in London has been before the House of Commons. It proposed to start from a junction with a line to Waterloo Station, already authorised, at Trafalgar Square, and go to Dudley Street, St. Giles's, from which point a line was to be carried by George Street, Bloomsbury Street, New Oxford Street, Snow Hill, Holborn Viaduct, and Newgate Street to St. Martin's-le-Grand. The estimated cost was 395,000*l.* The Committee rejected the Bill.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MAY 3, 1884.

### COMPETITIONS OPEN.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**SUNDERLAND.**—May 19.—Designs are invited for Laying out Twenty Acres of Land, the Mill Farm and Broad Meadows, Durham Road, Sunderland, for Villas, Terraces, or Street Rows, with Sewerage, &c. Premiums of Thirty and Twenty Guineas. Messrs. Duncan & Duncan, Solicitors, 3 Market Place, South Shields.

### CONTRACTS OPEN.

**ABERAVON.**—May 5.—For Additions to Police Station Plans, &c., at the County Offices, Westgate Street, Cardiff.

**ASHBY.**—May 9.—For Building Primitive Methodist Chapel. Mr. L. Petch, Ashby, Brigg.

**BALSALL HEATH.**—May 5.—For Sewerage Works in connection with Storm-water Outlet. Mr. Sam Owen, Surveyor, Lime Grove, Moseley Road, Birmingham.

**CAIRNBATHIE.**—May 3.—For Building Dwelling-house. Messrs. Cochran & Anderson, Advocates, 152 Union Street, Aberdeen.

**CARDIFF.**—May 8.—For Cast-iron Pipes (450 tons), Castings, &c. Mr. J. A. B. Williams, C.E., Queen's Chambers, Queen Street, Cardiff.

**CARLISLE.**—May 15.—For Building Sewage Screening Chamber, &c. Mr. H. U. McKie, City Surveyor, Town Hall, Carlisle.

**CARLISLE.**—May 15.—For Building Fire-engine Station. Mr. H. McKie, City Surveyor, Town Hall, Carlisle.

**CLAREMOUNT.**—May 9.—For Building House in Parker Street. Mr. J. Farrar, Architect, Crossley's Buildings, 29 Northgate, Halifax.

**CRUMPSALL.**—May 8.—For Erection of Iron Footbridge at Workhouse Infirmary. Messrs. Mills & Murgatroyd, Architects, 23 Strutt Street, Manchester.

**DEVON.**—May 12.—For Construction of small Girder Bridge near Silverton Station. Mr. E. H. Harbottle, Architect, County Chambers, Exeter.

**DUNDALK.**—May 13.—For Building Corn Store. Mr. James Gaskin, Church Street, Dundalk.

**FORD, HONITON.**—May 5.—For Erection of Two-arch Bridge over River Otter. Mr. E. H. Harbottle, Architect, County Chambers, Exeter.

**FOVEY.**—May 5.—For Additions to Florence Villa. Mr. W. J. Samble, Architect, Helston.

**FRASERBURGH.**—May 7.—For Walls, Railings, Gates, &c., for Extension of Burial Ground. Messrs. Jenkins & Marr, C.E., 16 Bridge Street, Aberdeen.

**GAINSBOROUGH.**—May 19.—For Making a new Barrier Bank. Mr. Alfred Atkinson, Surveyor of Sewers, Brigg.

**GLASGOW.**—May 7.—For Building Workmen's Houses. Messrs. Thomson & Turnbull, Architects, 122 Wellington Street, Glasgow.

**GRANGE.**—May 21.—For Building Stables at Yewbarrow Lodge. Mr. J. Bintley, Architect, Old Town Hall Chambers, Kendal.

**GRANGETOWN.**—May 5.—For Building Sixty-two Cottages. Messrs. James, Seward & Thomas, Architects, St. John's Square, Cardiff.

**HAMMERSMITH.**—May 15.—For Brick Sewers (4,620 feet) in Bridge Road, &c. The Engineer, Metropolitan Board of Works, Spring Gardens, S.W.

**HAVERIGG.**—May 14.—For Building Villa. Mr. J. W. Grundy, Architect, Brodgen Street, Ulverstone.

**HEALEY WOOD.**—May 5.—For Building Company Operation Premises. Mr. Thomas Dean, Architect, 21 Nicholas Street, Burnley.

**HEREFORD.**—May 15.—For Partial Restoration of St. Peter's Church. Mr. T. Nicholson, Architect, Hereford

**HOMERTON.**—May 14.—For Building Ambulance Station. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**HORNSEY.**—May 5.—For Construction of Brick and Concrete Tank Sewer, and Brick Drains, &c. Mr. T. de Courcy Meade, C.E., Surveyor to the Hornsey Local Board, Southwood Lane, Highgate, N.

**KENDAL.**—May 5.—For Erection of Loose Boxes, Cart-house and Offices, Boundary Walls, &c., Castle Green. Mr. John Stalker, Architect, 4 Aynam Place, Kendal.

**KENILWORTH.**—May 5.—For Erection of Pumping Station and Water Tower, and Construction of Wells and Additions. Mr. E. Pritchard, C.E., 27 Great George Street, Westminster, and 37 Waterloo Street, Birmingham.

**KENSINGTON.**—For Building large Block of Stabling. Messrs. Barker & Roscoe, 191 Earl's Court Road.

**KILWENDEAGE.**—May 5.—For Additions to Mansion. Mr. G. Morgan, Architect, 24 King Street, Carmarthen.

**KING CROSS.**—May 5.—For Additions to Liberal Club. Messrs. Petty & Ives, Architects, Waterhouse Street, Halifax.

**LAMBETH.**—May 7.—For Building Day-room for Nurses at the Infirmary, Brook Street. Messrs. Fowler & Hill, Architects, 9 Serjeant's Inn, Fleet Street.

**LEITH.**—May 7.—For Deepening Harbour and Docks Entrance. Mr. J. Terry, Clerk to the Harbour Commissioners, 13 Heriot Row, Edinburgh.

**LLANDAFF.**—May 7.—For Construction of Boundary Walls, Entrance Gates, Iron Railings, &c., for Cemetery. Mr. E. W. Corbett, Angel Street, Cardiff.

**LOWER WORTLEY.**—May 5.—For Enlarging and Refurnishing Chapel. Mr. T. Howdill, Architect, Park Offices, 40 Park Lane, Leeds.

**MACHEN.**—May 5.—For Building Chapel. Rev. D. Lloyd, Machen, Newport, Mon.

**MELTON MOWBRAY.**—May 21.—For Enlarging Saltby Church. Rev. C. Rodwell, Sprexton Vicarage, Melton Mowbray.

**NATIONAL GALLERY.**—May 5.—For Extension of Buildings. Office of Works, 12 Whitehall Place, S.W.

**NEWCASTLE.**—May 5.—For Alterations to 73 Campbell Street, and for Building five Cottages at Dudley, and Additions to Dudley Hotel. Mr. Arthur Stockwell, Architect, 151 Barras Bridge, Newcastle-on-Tyne.

**NEWPORT.**—May 8.—For Fixing Iron Roofs over Retort-house, &c., at Crindon. Mr. E. F. Marfleet, Secretary, Gas Company's Offices, Newport, Mon.

**NEWTON STEWART.**—May 3.—For Building M'Mullan Hall and Additions to Machermore Castle. Mr. Richard Park, Architect, Newton Stewart.

**NUNEATON.**—May 6.—For Construction of Cast-iron and Earthenware Pipe Sewers. Mr. John Estlin, Nuneaton.

**OLDHAM.**—May 20.—For Building Workhouse Schools. Mr. Alexander Banks, Architect, 231 Rochdale Road, Oldham.

**PICKERING.**—May 12.—For Partial Restoration of Middleton Church. Mr. C. Hodgson Fowler, F.S.A., Architect, The College, Durham.

**READ.**—May 6.—For Building Church. Mr. Henry Ross, Architect, Birch Street, Acerington.

**RENFREW.**—May 9.—For Widening and Deepening Harbour. Mr. W. R. Kinnipple, C.E., Havelock Buildings, Greenock.

**SEATON, DEVON.**—May 31.—For Extensive Additions to Beach House for an Hotel. Mr. Eggar, Architect, 57 Gower Street, Bedford Square, London.

**SHAVINGTON-CUM-GRESTY.**—May 5.—For Enlargement of Board School. Mr. Bower, Architect, Nantwich.

**SOUTH WARNBOROUGH.**—May 8.—For Building Pair of Cottages, Blounce Farm. Messrs. Haslam & Son, Surveyors, 17 Friar Street, Reading.

**STRATFORD-ON-AVON.**—May 17.—For Cast-iron Socket Pipes (650 tons), Special Castings, &c. Mr. E. Pritchard, C.E., 27 Great George Street and 37 Waterloo Street, Birmingham.

**SWINDON.**—May 14.—For Erecting Block of School Buildings. Mr. W. H. Read, Architect, Swindon.

**WALSALL.**—For Erection of Farm Buildings and other Works. Mr. G. H. Stanger, C.E., North Street, Wolverhampton.

**WALSALL.**—May 10.—For Erection of Farm Buildings and other Works at Brockhurst Farm for the Corporation. Mr. Samuel Wilkinson, Town Clerk, Bridge Street, Walsall.

**WARLEY.**—May 3.—For Building Parsonage, &c. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

**WARRINGTON.**—May 5.—For Extension of Market (Foundations). Mr. T. Longdin, Borough Surveyor.

**WOLVERHAMPTON.**—May 6.—For Wrought-iron Girders (200 tons) for Construction of Bridge. The Engineer, Paddington Station.

**YORK.**—May 5.—For Additions to Premises. Mr. W. H. Thorp, Architect, St. Andrew's Chambers, Park Row, Leeds.

### TENDERS.

#### ACTON.

For the Erection of a Pair of Semi-detached Villas for Mr. Ainslie Harwood, on Cumberland Park Estate, Acton. Mr. ALFRED WRIGHT, Architect and Surveyor, Belgrave House, 190A Brompton Road, and 18 Hayter Road, Brixton Rise.  
Bray . . . . . £1,700 0 0

#### BARTON-UNDER-NEEDWOOD.

For Earthenware Pipe Sewers, Sewage Straining Tanks, Manholes, Flushing Sluices, &c., for the Burton-on-Trent Rural Sanitary Authority. Mr. G. WATSON, Surveyor.

J. & C. Hunter, Burton-on-Trent . . . . .	£895 0 0
Curral & Lewis, Birmingham . . . . .	825 0 0
Philbrick, Burton-on-Trent . . . . .	736 0 0
Stevenson, Chesterfield . . . . .	670 0 0
Hodges, Burton-on-Trent . . . . .	670 0 0
Harris, Shrewsbury . . . . .	650 0 0
Dickson, Burton-on-Trent . . . . .	650 0 0
Perkins, Burton-on-Trent . . . . .	633 13 4
Freeman, Stafford . . . . .	619 19 0
Lowe & Sons, Burton-on-Trent . . . . .	610 0 0
Hilton & Sons, Birmingham . . . . .	599 0 0
Smith & Co., Leicester . . . . .	591 11 1
Buckle & Co., Leicester . . . . .	585 6 8
M'Kay, Stoke-on-Trent . . . . .	580 0 0
Corrie, Lichfield . . . . .	578 0 0
FRAYNE & Co., Bromsgrove (accepted) . . . . .	554 11 7
Surveyor's estimate . . . . .	550 0 0

#### BASINGSTOKE.

For Erection of Purifying House and Oxide Floor at the Gasworks, Basingstoke.

Pike Bros. . . . .	£550 0 0
Jennings . . . . .	550 0 0
Tigwell . . . . .	549 0 0
Tarrant . . . . .	520 0 0
Sims . . . . .	499 0 0
Goodall . . . . .	491 9 0
Kent & Lunn . . . . .	448 6 8
MUSSELLWHITE (accepted) . . . . .	444 15 0

#### BIRKENSHAW.

For Building Shops, Warehouse, Dwelling-house, &c., for the Birkenshaw Industrial Society, Limited. Mr. W. H. HOWORTH, Architect. Quantities by the Architect.

##### Accepted Tenders.

Pickard & Son, Laisterdyke, mason and joiner . . . . .	£1,500 0 0
Hodgson & Son, Bradford, plumber . . . . .	
Lodgson & Son, Bradford, slater and plasterer . . . . .	
Spencer, Bradford, heating apparatus . . . . .	
Lister & Myers, Bradford, painter . . . . .	
Cordingley & Sons, Bradford, concrete floors . . . . .	
Topham, Dudley Hill, ironfounder . . . . .	
Street, Bradford, revolving shutters . . . . .	

#### BIRMINGHAM.

For Heating Apparatus for Residence of Mr. J. Flint, Faraquer Road, Edgbaston, Birmingham.  
RENTON GIBBS, Liverpool (accepted).



**BOSCOMBE.**

For Dormitories, Entertainment Room, Lavatories, &c., to Coffee Tavern, Boscombe. Mr. CHARLES T. MILES, Architect, Observer Chambers, Bournemouth.	
James, Bournemouth	£354 0 0
Jeans, Bournemouth	336 0 0
Potts, Boscombe	315 0 0
WHINERAH, Boscombe (accepted)	287 0 0

**BRIESTFIELD.**

For Additions to House at Bristfield, Yorkshire. Mr. R. F. ROGERSON, Architect and Surveyor, Brighouse.

Masons.	
Booth, Thornhill, Dewsbury	£53 10 6
Witcock, jun., Thornhill Edge, Dewsbury (accepted)	33 0 0
Greggory, Bristfield, Dewsbury	32 10 0

Joiners.	
ADDY & LEE, Thornhill, Dewsbury (accepted)	25 10 0
Brook, Thornhill, Dewsbury	25 0 0

Plasterers.	
Broadbent, Vulcan Road, Dewsbury	9 16 0
GRANGE & COOKSON, George Street, Heckmondwike (accepted)	6 18 0

**CARLTON.**

For Street Improvement Works for Carlton Local Board. Mr. W. WALKER, Surveyor, Beeston.

Cordon, jun., Nottingham	£343 0 0
Cordon, sen., Nottingham	303 10 0
Hopkins, Nottingham	238 4 3
Morris, Carlton	271 0 6
Smith, Leicester	263 1 10
HAWLEY, Ilkeston (accepted)	229 0 7

**COVENTRY.**

For Building Fever Hospital, Coventry. Mr. E. J. PURNELL, C.E., City Surveyor.

MAYO (accepted)	£3,630 0 0
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**DARENTH.**

For Certain Plastering Work to be done at the Imbecile Schools, Darenth, Kent, for the Managers of the Metropolitan Asylum District. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C.

Gumbrell	£519 0 0
Proctor	306 0 0
Stride	254 0 0
Hawking	239 0 0
Spencer	227 0 0
Potter	220 0 0
Wall Bros.	199 0 0
Feltham Bros.	188 0 0
Barwell	180 0 0
Barter & Bickley	171 0 0
Lane	148 0 0
SUFFLE, Gravesend (accepted)	138 0 0

For Road-making, Bridge-work, and Fencing to the Roads of Long Reach Marshes, for the Managers of the Metropolitan Asylum District. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C.

Stephens	£5,346 0 0
Bottoms Bros.	3,500 0 0
Wall Bros.	3,175 0 0
Chafen	3,140 0 0
Roop	3,125 0 0
R. & E. Evans	2,274 0 0
Hubbard & Ellingham	1,892 0 0
Cooke & Co.	1,882 0 0
Killingback	1,872 0 0
BEADLE BROS., Erith (accepted)	1,569 0 0

For the Erection of a Boundary Wall at the Site of Convalescent Hospital, Gore Farm, Darenth, for the Managers of the Metropolitan Asylum District. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C.

Nightingale	£1,835 0 0
Bottoms Bros.	1,735 0 0
Rowland Bros.	1,600 0 0
Wall Bros.	1,380 8 8
BEADLE BROS., Erith (accepted)	1,376 0 0

**FAVERSHAM.**

For new 120-Quarter Malting, Faversham, for Messrs. W. E. & J. Riden, being Section 2 above Ground Line. Mr. RICHARD WATTE, Architect, Duffield, Derby.

Glasscock & Son, Bishop Stortford	£6,650 0 0
Paramor & Son, Margate	6,600 0 0
Perry & Co., London	6,055 0 0
Stiff, Dover	5,909 0 0
Wise, Deal	5,776 0 0
Wallis & Clements, Maidstone	5,770 0 0
Shrubsole, Faversham	5,699 0 0
Denne & Son, Deal	5,579 0 0
Dickinson, London	5,136 0 0
GREENWOOD, Mansfield (accepted)	4,930 0 0
Todkill & Bellamy, Sutton Bridge (too late)	4,800 0 0

**Other Accepted Tenders.**

Wilkinson & Son, Newcastle-on-Tyne, concrete floors	£1,818 0 0
Shrubsole, Faversham, works below ground line (already executed)	849 0 0
Measures Bros., rolled iron joists	500 0 0
Orrick & Co., London, wire kiln floors	338 0 0
Abell, Derby, cast-iron columns	375 0 0
White, Abergavenny, hygeian rock	134 0 0
Total, £8,994.	

**HANLEY.**

For Construction of Police Cells, Strong Room, &c., at the Corporation Buildings, Hanley.

CORNES (accepted)	£467 5 0
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**HEREFORD.**

For New Schoolroom and Additions to Westmoor Villa, Hereford. Mr. W. W. ROBINSON, Architect, Hereford.

Bowers & Co.	£590 0 0
Beavan & Hodges	580 0 0
CULLIS (accepted)	580 0 0

**HIGH WYCOMBE.**

For Additions to the Cottage Hospital, High Wycombe. Mr. ARTHUR VERNON, Architect, High Wycombe.

Loosley	£209 0 0
Hunt	195 0 0
HARRIS (accepted)	180 0 0
Lacey	150 0 0

**JARROW.**

For Building Chapel, Jarrow. Mr. W. HILL, F.R.I.B.A., Leeds. Quantities by Mr. L. Oldroyd, Leeds.

Kennedy & Son, Jarrow-on-Tyne, general works	£2,080 0 0
Johnson, Leeds, plumber	120 0 0
Greenwood, Leeds, painter	60 0 0

**KETTERING.**

Tenders for new Streets, Kettering, Northamptonshire. Mr. R. W. JOHNSON, Architect and Surveyor, 1 George Street, Kettering.

Brown, Northampton	£1,794 15 6
Smith, Leicester	1,552 6 4
G. V. Henson, Kettering	1,410 0 0
Underwood, Wellingboro'	1,409 4 8
C. & F. Henson, Kettering	1,394 15 0
Ward, Leicester	1,386 7 11
Neale, Kettering	1,332 0 0
Barton, Kettering	1,275 0 0
PAYNE, Kettering (accepted)	1,214 17 6

**LEEDS.**

For Enlargement of Wesleyan Chapel, Beeston Hill, Leeds. Mr. W. HILL, F.R.I.B.A., Leeds. Quantities by Mr. Linley Oldroyd, Leeds.

Myers, bricklayer, &c.	£445 0 0
Booth, joiner, &c.	370 0 0
Branton, plasterer	50 0 0
Thompson, plumber	38 0 0
Sharp & Harpen, slater	28 10 0

**LEICESTER.**

For Construction of Wrought-iron Lattice Girder Towing Path Bridge (Six Spans), in connection with Weir, Leicester Navigation. Mr. J. GORDON, C.E., Borough Surveyor, Engineer. Quantities by the Engineer.

Dyne, Street & Co., Newport	£1,375 0 0
Lysaght, Bristol	1,258 16 2
Wright Bros., Leicester	1,175 0 0
Cochrane & Co., Dudley	1,156 18 8
Hill & Smith, Brierley Hill	1,113 19 1
Stableford & Co., Coalville	1,100 0 0
Simpson & Wood, Darlaston	1,046 4 9
Gimson & Co., Leicester	989 4 6
Bridge and Roofing Company, Darlaston	983 7 9
Handyside Bros., Derby	967 19 9
Heaman & Woodhouse, Manchester	956 0 0
Fletcher Bros., Wolverhampton	918 11 7
Spurr & Imman, Wakefield	889 5 7
J. O. & C. E. Brettell, Worcester	887 15 6
E. C. & J. Keay, Birmingham	883 13 7

**LINCOLN.**

For Building Seven Houses in Albany Street, Lincoln. Mr. J. T. DRURY, Surveyor.

Crosby & Sons	£429 0 0
J. M. Harrison	405 0 0
Thompson	390 0 0
Allman	380 0 0
J. B. Harrison	377 0 0
MILLS (accepted)	349 18 4

For Building Four Houses, Waldeck Street, Lincoln. Mr. J. T. DRURY, Surveyor.

J. M. Harrison	£258 10 0
Baxter	256 10 0
Mills	235 0 0
Allman	227 15 3
J. B. HARRISON (accepted)	219 0 0

For Building Six Houses and Shop, Burton Road, Lincoln. Mr. J. T. DRURY, Surveyor.

J. M. Harrison	£495 0 0
Thompson	449 0 0
J. B. Harrison	439 0 0
Allman	425 0 0
MILLS (accepted)	393 0 0

For Stone for Houses as above in Albany Street, Waldeck Street, and Burton Road, Lincoln. Mr. J. T. DRURY, Surveyor.

Holms & Clayton	£67 10 0
Colley Bros.	67 0 0
Binns	64 10 0
FOOTIT (accepted)	59 0 0

**LONDON.**

For Alterations to the Old Axe Public-house, Hackney Road. Messrs. WILSON, SON & ALDWINCKLE, Architects.

Shurmur	£630 0 0
Staines & Son	607 0 0
Drew & Cadman	600 0 0
Mills	590 0 0
Jackson & Todd	540 0 0
Lusk	490 0 0

For Alterations to the Spread Eagle Public-house, Whitecross Street, E.C. Messrs. WILSON, SON & ALDWINCKLE, Architects.

Staines & Son	£1,196 0 0
Shurmur	1,152 0 0
Mills	1,080 0 0
Jackson & Todd	1,050 0 0
Drew & Cadman	1,033 0 0
Lusk	970 0 0

For Alterations and Repairs to the Hercules Pillars, Great Queen Street, Long Acre, for Messrs J. Carter Wood & Co., Artillery Brewery, Victoria Street, Westminster. Mr. J. CALDER, Architect. Quantities by Mr. Edward Crutchloe, Albert Chambers, Victoria Street, Westminster.

Falkner	£395 0 0
Axford	375 0 0
King & Son	330 0 0
STILING (accepted)	299 15 0

**LONDON—continued.**

For Repairs and Decorations at No. 56 West Cromwell Road, South Kensington, for Mrs. Angle, Messrs. EBBETTS & COBB, Architects.

Perkins	£287 10 0
Williamson	283 18 0
Baylis	227 0 0
Steel Bros.	199 0 0

For Alterations to the Jane Shore Public-house, Shore-ditch, for Mr. E. J. Rose. Messrs. WILSON, SON & ALDWINCKLE, Architects.

Lusk	£347 0 0
Staines & Son	289 0 0
J. & H. Mills	265 0 0
Shurmur	234 0 0
Wood	220 0 0

For the Erection of New Ragged School and Mission House Fox Court, Gray's Inn Road, Holborn, for the Committee. Mr. GEORGE FAGG, Architect.

Horsley	£1,475 0 0
Patman & Fotheringham	1,353 0 0
Williams & Son	1,327 0 0
Dixon	1,271 0 0
Adamson & Sons	1,180 0 0
Webber	1,087 0 0

For proposed Alterations and Additions to Warehouses, Cooper Row, E.C., for Messrs. Barber & Co. Mr. E. CLIFTON, Architect. Messrs. Williams & Gritton, Surveyors.

Corder	£3,091 0 0
Lawrance	2,895 0 0
Ashby & Horner	2,890 0 0
Morter	2,793 0 0

For various Works required to be done in proposed Alterations and Additions to Nos. 43 and 45 Farm Street, Mayfair, for Mr. J. Innes. Mr. R. B. MARSH, Architect. Mr. D. Campbell, Surveyor.

Brass	£3,276 0 0
Greenwood	3,240 0 0
Boyce	3,200 0 0
Bangs	3,133 0 0
Corder	2,993 0 0
Nightingale	2,890 0 0
Lawrance	2,890 0 0

For new Premises corner of Holborn Circus and Hatton Garden, for Mr. A. Brown. Mr. F. CHAMBERS, Architect. Mr. Mark King, Surveyor.

Holland & Hannen	£16,420 0 0
Brass	14,960 0 0
Ashby & Horner	14,890 0 0
Greenwood	14,696 0 0
Wagstaff	14,639 0 0
Colls & Son	14,536 0 0
Lawrence & Son	14,459 0 0
Corder	14,333 0 0
Shurmur	13,986 0 0
Grover	13,843 0 0

**If Portland Stone Front.**

Holland & Hannen	15,370 0 0
Ashby & Horner	14,620 0 0
Greenwood	14,003 0 0
Wagstaff	13,920 0 0
Colls & Son	13,907 0 0
Lawrence & Son	13,828 0 0
Corder	13,691 0 0
Shurmur	13,644 0 0
Grover	13,084 0 0

**LYNDHURST.**

For the Erection of a House and Offices, to be known as Camp Hill, at Emery Down, near Lyndhurst, Hampshire, for Major Ward Jackson. Mr. W. H. MITCHELL, Architect, Southampton.

Byer & Sons, Southampton	£1,988 0 0
Crook, Southampton	1,844 0 0
Stevens & Sons, Southampton	1,820 0 0
Hayter, Lyndhurst	1,814 0 0
Sander, Southampton	1,783 0 0
Payne Bros., Lyndhurst	1,753 9 0
ROWLAND, Southampton (accepted)	1,641 0 0

**NEWTON-LE-WILLOWS.**

For Building Cemetery Chapel, Lodge, Mortuary, &c., at Newton-le-Willows. Mr. R. BRIERLEY, Surveyor.

Pennington, Newton-le-Willows	£2,908 0 0
Yates, Liverpool	2,749 0 0
Preston, Wigan	2,733 11 6
Harrison, St. Helen's	2,723 0 0
Haghton, Godley	2,635 0 0
Winnard, Wigan (too late)	2,620 8 0
Porter, Warrington	2,568 0 0
Collins & Son, Warrington	2,515 4 0
Beckett, Hartford	2,498 0 0
ROTHWELL, St. Helens (accepted)	2,387 0 0

**Draining and Laying out Grounds.**

White, Liverpool	£1,398 17 0
Sterling, jun., Liverpool	1,032 0 0
Heaton, Warrington	950 0 0
Adamson, Ashton-le-Willows	884 12 11
Rothwell, St. Helens (too late)	875 0 0
CUNLIFFE, Leigh (accepted)	832 18 0

**NORWOOD.**

For Granite Curbing and Tar-paving Footpaths in the Auckland Road, Upper Norwood, for Mr. J. C. Pawley, Surveyor, 26 Moorgate Street, E.C.

Atkins, Twickenham	£252 9 0
Benstead & Sons, Maidstone	230 7 9
Hobman & Co., South Bermondsey	227 3 2
WOODHAM & FRY, Greenwich (accepted)	190 0 0

For Erection of New Premises at Lower Norwood, for the London and County Banking Company, Limited. Mr. HORACE CHESTON, Architect.

Morter	£4,929 0 0
Rider & Son	4,888 0 0
Boyce	4,860 0 0
Bowyer	4,792 0 0
Perry & Co.	4,738 0 0
Shurmur	4,680 0 0
Higgs & Hill	4,578 0 0
Spencer	4,415 0 0
TAYLOR, Croydon (accepted)	4,290 0 0



## NEWARK.

For Heating Apparatus, Free Church, Newark.  
RENTON GIBBS, Liverpool (accepted).

## PONTYPRIDD.

For Building Chapel at Pontypridd. Mr. THOMAS ROWLAND, Architect, Pontypridd. Quantities by the Architect.  
Davies, Cardiff . . . . . £3,250 0 0  
Watkins & Jenkins, Swansea . . . . . 2,595 0 0  
SEATON, Pontypridd (accepted) . . . . . 2,513 0 0  
Kensley, Ton Gwynlais . . . . . 2,450 0 0

## ROSSENDALE.

For Building Church, Edge Side, Holme, Rossendale. Mr. T. BELL, Architect, Burnley.

## Accepted Tenders.

Corpe, mason . . . . .  
Holt, joiner . . . . .  
Rushton, slater . . . . .  
Colling Bros., plumber . . . . .  
Shuttleworth, painter . . . . .  
£3,000 0 0

## VELINDRE.

For Building a Pair of Cottages on the Estate of Captain Wood at Velindre. Messrs. C. & G. BUTCHER, Architects, Glasbury.  
Powell, Hay . . . . . £500 0 0  
W. Price, Velindre . . . . . 393 0 0  
T. PRICE, Hay (accepted) . . . . . 386 0 0

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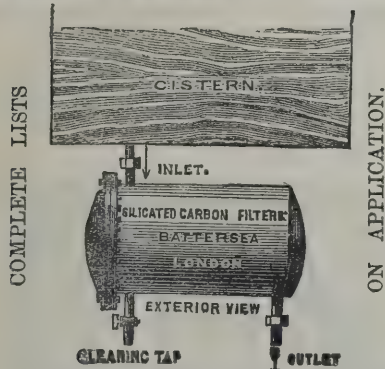
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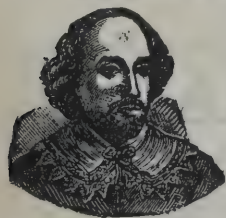
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in-Sheppey School Board.

Taylor, Sheerness . . . . . £172 0 0  
Webb, Minster . . . . . 169 10 0  
DAWSON, Sheerness (accepted) . . . . . 162 0 0  
Hutchinson & Co., Clayton . . . . . 161 2 6  
Ap Lloyd, London (concreting alone) . . . . . 90 0 0

## SOUTHAMPTON.

For Widening St. Mary Street, &c., Southampton. Mr.  
W. B. G. BENNETT, Borough Surveyor.  
Cowdery & Son, Southampton . . . . . £531 14 0  
Martin, Southampton . . . . . 453 0 0  
Hall & Co., Portsmouth . . . . . 447 0 0  
Crook, Southampton . . . . . 427 0 0  
Franklin, Southampton . . . . . 409 0 0  
BULL & SONS, Southampton (accepted) . . . . . 360 0 0

## WHITEHAVEN.

For Building Stable and Coach-house at Oak Bank, for Mr.  
R. Fletcher. Messrs. PICKERING & CROMPTON, Archi-  
tects, Whitehaven.

	Cemented walls inside.	Glazed brick walls inside.
Metcalf . . . . .	£270 2 6	£810 2 6
Christopherson . . . . .	769 0 0	804 0 0
McAdam . . . . .	765 5 0	802 15 0
COURSINS (accepted) . . . . .	722 15 0	738 12 11
Glaister . . . . .	706 0 0	731 0 0

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## WALLSEND.

For Building Villa at Wallsend.

White, Walker . . . . . £831 0 0  
GREEN, Wallsend (accepted) . . . . . 780 0 0  
Farrell, Wallsend . . . . . 718 4 0

## WEST HAM.

For Erection of Block of School Buildings, Upton Cross,  
West Ham, for 1,067 Children. Mr. J. T. NEWMAN,  
Architect, 2 Fen Court, E.C. Quantities by Messrs.  
R. S. Curtis & Sons.

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Magee & Co. . . . .	9,180 0 0
Hoskings . . . . .	9,072 0 0
Nightingale . . . . .	9,052 0 0
Josolyne (too late) . . . . .	8,925 0 0
Hearle & Son . . . . .	8,856 0 0
Gregar . . . . .	8,544 0 0
Morter . . . . .	8,405 0 0
Reed . . . . .	8,278 0 0
Holloway . . . . .	8,090 0 0
Hobbs . . . . .	8,029 0 0
Priestly & Gurney . . . . .	7,922 0 0
Brickell . . . . .	7,900 0 0

Cost per head, £7 8s.

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Bartlett . . . . .	£1,375 0 0
Innes . . . . .	1,337 0 0
Clark . . . . .	1,300 0 0
Brown . . . . .	1,298 0 0
Jesty . . . . .	1,229 0 0
WHEATHAM (accepted) . . . . .	1,145 0 0

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# BELL'S ASBESTOS.

## BELL'S ASBESTOS FLOORING FELT.

This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

**BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION** for coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent. more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of fresh, and applied again. The composition is supplied dry, and only requires to be mixed with water to the consistency required for use.

A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates .. .. .	186 deg.
"          Covering .. .. .	94 "

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

Offices of Wimbledon Local Board, Wimbledon, Nov. 28th, 1883.  
Dear Sir.—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*.

Mr. John Bell, Glasgow, Nov. 14th, 1883.  
Sir,—As one of the means that helped to save our buildings extending from Buchanan Street to Mitchell Street from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the *Evening Times* case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of the Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.



## BELL'S ASBESTOS.

The goods of this house are of the highest quality only, and no attempt is made to compete with other Manufacturers by the supply of inferior materials at low prices. All orders must be sent direct to the undermentioned depots, and not through agents or factors.

**BELL'S ASBESTOS AND INDIA-RUBBER WOVEN TAPE AND SHEETING** for making every class of steam and water joint. It can be bent by hand to the form required, without puckering, and is especially useful in making joints of man-hole and mud-hole doors on boilers; also for large "still" joints, where boiling fat and steam have to be resisted. It is kept in stock in rolls of 100 feet, from 1/4-in. to 3-in. wide, and any thickness from 1/8 in. upwards. Manhole covers can be lifted many times before the renewal of the jointing material is necessary. The same material is made up into sheets about 40 in. square, and each sheet bears the trade mark, without which none is genuine. It is very necessary to guard against imitations of this useful material, and to secure themselves against being supplied with these less useful articles at my price, users are recommended to see that every 10-ft. length of the Asbestos Tape purchased by them bears the trade mark.

**BELL'S ASBESTOS CEMENT** for the backing of firebricks and furnaces. The use of this fireproof material saves the expense and annoyance occasioned by the repairs so constantly required in the firebricks and kitchen ranges of private houses. Any labourer accustomed to handle other cements can apply this.

**BELL'S ASBESTOS BOILER PRESERVATIVE**.—This useful mixture, by absorbing the free oxygen that is in the water, entirely checks pitting and corrosion. It also disintegrates incrustation so immediately as to prevent its adhering to the plates. Not only is a great economy of fuel effected by keeping boilers clean, but the risk of having the plates burned is thereby obviated. It has been computed that 1-16th inch thick of incrustation causes a waste of 15 per cent. of coal; 1/8 inch thick, 60 per cent.; and 1/4 inch, 150 per cent. Thus the Preservative avoids the great risks which are inseparable from scaled plates, lengthens the life of a boiler, and covers its own cost a hundredfold by economy of fuel. It is entirely harmless, and has no injurious action on metals. It can be put into the feed tank or boiler, as may be most convenient. Sold in drums and casks bearing the trade mark, without which none is genuine.

**BELL'S PURE ASBESTOS CLOTH**, for protection against the spread of fire. Iron curtains warp, and in the great emergency of fire will often be immovable. Asbestos cloth, being incorruptible, will remain strong and flexible for an indefinite period, and will stay the progress of a fire and the passage of smoke longer than any other known material. This cloth is also extensively used in Maignen's unequalled water filters, for which a gold medal and diploma of honour were awarded by the Special Commission appointed by Her Majesty's Government to receive the reports of the International Juries at the Fisheries Exhibition. By special arrangement with Mr. Maignen, his filters for houses, factories, and towns are supplied by this firm.

**BELL'S ASBESTOS BLOCK GAS FIRES**.—The Asbestos Block Gas Fire is formed by placing inside the ordinary grate a hollow block (burner), composed of Asbestos, and perforated. An iron sole-plate, with a single gas burner, is fixed at the bottom of the block. After being lighted a short time, both the block and asbestos fuel throw out intense heat.

**BELL'S ASBESTOS FUEL** for gas fires. This genuine Asbestos Fuel is composed of the finest hand-picked Asbestos, and its weight is about half that of any other Asbestos fuel.

**BELL'S SPECIAL LONDON-MADE ASBESTOS MILLBOARD**, for dry steam joints, made of the best Asbestos fibre, is well-known for its toughness and purity, and is absolutely free from the injurious ingredients frequently used to obtain an appearance of finish, regardless of the real utility of the material. Made in sheets measuring about 40 in. square, from 1-64th in. to 1 in. and 1/2 millimetre to 25 millimètres thick. Each sheet bears the Trade Mark.

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White Facing, Fire, Blue Paving, Red Pressed Bricks, of Great Strength, Quarries, Ridge Tiles, &c.

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# The Architect.

## ARCHITECTS AND CONTRACTORS: THE QUANTITIES QUESTION AGAIN.



“The duties, obligations, and mutual relations of architect and contractor” we have one of the subjects selected for discussion before the Conference of Architects which has been held during this week; and no doubt there is a great deal to be said in these days upon the whole matter. We might even go so far as to suggest that there is a great deal to be said, as the phrase goes, on both sides; for there are two sides in the case, the contractors being not quite satisfied with what the architects often expect them to do, and the architects being little better pleased sometimes with the contractors’ expectations, and, indeed, artifices.

At first sight, the bargain seems simple enough when a professed builder agrees to build a house, according to a certain plan, for a certain sum of money, and a professed architect, who has designed this plan, agrees to direct and superintend the execution of it. The transaction does not appear to be in any way rendered more difficult when our attention is directed to the circumstance that the builder and the architect are both employed by the same dominant proprietor, who is a *tertium quid* by whose means alone the two operators are brought into the condition of having “duties, obligations, and mutual relations” towards each other. The whole affair, so far, is straightforwardness itself; and in fact to so shrewd an intellect, for instance, as that of a judge of a Court of Law, it is practically out of the range of forensic argument to attempt to show that the business ought to involve any risk of misunderstanding. Here is an experienced contractor, who, with his eyes wide open, enters into a contract; and there is an experienced architect, who, with his eyes wide open also, undertakes to see the contract performed; the one has to do what he has agreed to do, the other has to see that it is done; nothing can be simpler, and there is only one question that can possibly arise, Is the thing done as agreed—yes or no?—a question that a child might answer, and so on. Thus might we suppose a very learned judge to speak, and to wait for an answer which equally learned counsel would fail to supply.

But if there is one thing more than another in which the current somehow never will run smooth, it is this very practice of building a house according to the plan of an architect, and under his direction. It is a significant circumstance that the first builder in this world is said to have been CAIN. No doubt that objectionable patriarch was, in modern terms, his own contractor, his own architect, his own quantity-surveyor, and, so to speak, his own employer, so that the complexities attaching to modern undertakings in bricks and mortar may very likely have failed in a great measure to come before him. But, be this as it may, no sooner, we are further told, did building enterprise assert itself on anything like a large scale than disaster marked it for its own, and great Babel’s tower—but why pursue the narrative? It is enough to add that from those days to these, all over the world, building has been the fertile source of a thousand misadventures, and the best laid schemes of architects, contractors, and surveyors have constantly been going awry.

In modern countries of the more advanced commercial character, the rule of strict bargaining has been continually widening its application. Not only does it seem to be the case within one’s own recollection that the practice of settling beforehand the price of everything, however trifling, that is ordered to be done or made, has been acquiring greater force every year; but it cannot be denied that the principle of “speculation” has been obtaining greater recognition amongst producers, and, what is worse, demanding greater recognition still on behalf of consumers. In other words, contractors of all classes, builders emphatically included, have been growing more speculative in their competitive calculations as against

each other; and the agents of employers, architects included, not satisfied with even this, seem to have been encouraging, whether directly or indirectly, the still more ruinous idea (for all speculation is ruinous to the many if profitable to the few) that the employer is entitled to force upon a contractor, by the process of competition of tenders, the acceptance of undetermined and undeterminable “risks.”

The proper “duties, obligations, and mutual relations of architect and contractor” are in theory manifestly these. The contractor, being fully and responsibly informed by the employer upon every item of the work to be done, and having a perfect understanding with the employer as to the quality of that work in every respect, is thus enabled, for the commercial satisfaction of the employer, to inform him fully and responsibly what the price shall be for which the work is to be done honestly and well, and within certain reasonable limits of time, all unforeseen risks to be the employer’s risks. Upon this, in the next place, the architect undertakes to supply to the contractor all requisite directions for the execution of the work as intended, to exercise such control over both parties that the one shall not give too little or the other ask too much, and finally to make up a just account as regards any additional work done beyond the limits of the contract or any work omitted from within the same limits. But the difficulty in practice is how to carry out this equitable scheme, and it is plain that, the more intricate the conditions happen to be, the greater does the difficulty become.

On Tuesday evening last the subject was carefully discussed at a meeting, not large in numbers, but influential in character, and especially comprising a considerable proportion of provincial architects, together with a few representative quantity-surveyors and builders. Suffice it to say that the question, when fairly launched into debate, resolved itself into a single prominent point, namely, Who shall make out the bills of quantities? This, in short, seems to be the chief of all considerations just at present with those who are interested in the proper adjustment of the relations between architects and contracting builders in England; and the fact is soon discovered that provincial men insist upon the architect taking out his own quantities, while London men insist upon his not doing so. Both agree that the employer should be enabled to know beforehand what his expenditure is to be; but the provincials, as we may put the case, reject the speculative element which the Londoners are too ready to encourage. The Londoners say in effect this:—Let the architect refuse all personal responsibility for the price; let the contractor take all speculative risks; and let the quantity-surveyor, because he is a stranger, so to speak, to the transaction otherwise, take upon himself alone the whole burden of the calculation of the bills. The provincials, on the other hand, say this:—Let the contractor be relieved from the speculation risks; let the architect therefore make out the bills of quantities, because he is expressly not a stranger to the transaction otherwise; and let the employer take his chance, on these favourable terms, of being perhaps not quite so well assured beforehand of the cost of his undertaking. To bring the matter to a point, let the bills of quantities be the basis of the contract, and then the individual architect may be his own surveyor or not as he pleases. As one further principle, let the payment for the quantities be received, whether by the architect or by the surveyor, never from the builder, but always from the employer, and so the last suspicion of collusion will disappear. A variety of reports of the custom of foreign countries, which had been collected by Mr. CATES, who opened the discussion, excited a good deal of interest; and the mode followed in the great towns of Scotland was once more described, whereby the work is twice measured up, once before commencement for the tenders, and a second time after completion for the payment; but the perhaps universal opinion of the English architects present was in favour of the English plan, subject to the one reservation above described.

An honest beginning goes far to make a fair ending, and we feel that we cannot too strongly urge upon the profession the abandonment altogether of the system of speculative risks, even as regards the accuracy of the bills of quantities. The plain result of Tuesday’s discussion is that the Institute must give up the dogma that an architect ought to avoid the work of making the bills of quantities; there is nothing in it when fairly tested. The real question turns upon two points, competency and honesty; and to make the quantities the basis of



the contract seems to be all that is further requisite. We do not in any way underrate the commercial value of the quantity-surveyor, especially in large works; but we cannot see the necessity for forcing him upon every architect in the empire as a matter of conventional repute. At the same time, it might be a serious danger if London architects of high standing were to take to the practice of keeping private surveying clerks for the purpose of making their own bills of quantities. But, on the other hand, is it not the fact after all in most cases that the employer, when informed of the function of the quantity-surveyor, who is an entire stranger to him, simply tells the architect to do as he pleases, *because it is upon him, and not upon the stranger, that the responsibility must lie?*

## ARCHITECTURE AT THE ROYAL ACADEMY.

THE number of works included under the heading of Architectural Drawings in the catalogue of the Royal Academy Exhibition for 1884 is 142. But as a considerable number of sketches and studies of old work, some designs for stained glass, and a few competition drawings are counted in, the actual number of drawings representing the architecture of the year is below one hundred. Of the five architects who are Academicians or Associates, two—namely, Mr. BODLEY and Mr. PEARSON—do not exhibit; and the hangers have been so put to it to find works of first-rate importance for the places of honour in this room, that for the first time in our memory both the principal positions are occupied not only by drawings exhibited by one architect, but by drawings representing but one building, and that a private house. We are decidedly of opinion that the present collection is below the average, and that it is not only anything but an encouraging exhibition, but actually a disheartening one, for those who are anxious to see English architecture prosper and make sound progress.

The places of honour to which we have just alluded are allotted to Mr. NORMAN SHAW, R.A., who exhibits in two frames eight drawings of *Dawpool, Cheshire* (1250 and 1302). This is an extensive house on a large scale, shown in pen-and-ink drawings, some geometrical and some in perspective, from the hand of Mr. LETHABY—excellent drawings indeed, though hardly equal to some which that accomplished draughtsman has exhibited in former years. The plan indicates that a large top-lighted picture gallery forms the most prominent single feature in the scheme of the house, and may, indeed, almost be said to be the key to the arrangement of the whole. This gallery has an elliptic ceiling, and across one end of it is thrown an arcade of elliptic arches, forming a screen, and carrying a kind of balcony; while at the opposite end comes a wonderful combination of a cheminée and balcony. The general character of the exterior is Tudor, the windows have mullions and transoms, the gables are not stepped or broken, the chimney-stacks are very massive, and are crowned by twisted shafts, apparently in brick. The style of the interior is something more like Jacobean or late Elizabethan, and one cannot help regretting this want of harmony; nor is it quite easy to reconcile the idea of a lift, which is provided for on the plan, with the diamond quarries in the windows, or the Dennett arches shown on the section, with the general old-world air of the work. Notwithstanding such inconsistencies, there is a great deal of picturesque power in the design of this work, and it will rank among the best examples of its author's skill.

There is a third spot—the centre of the short west wall—where it is usual to hang some drawing which the authorities delight to honour. This position is occupied by a restoration of the famous Temple of Diana at Ephesus (1341), made by Mr. JAMES FERGUSON from the remains discovered by Mr. WOOD. The subject is one which in itself may well command respect, for the discovery of this temple is one of the brightest triumphs yet achieved by archaeological research. The fame of the restorer is great, and the drawing is beautifully executed; but we must demur to Mr. FERGUSON'S mode of solving what is perhaps the most difficult problem presented for solution by the remains unearthed—we allude to the disposition of the *columnæ celatæ*. These are so treated in this restoration that, while some stand on a lofty pedestal, others, forming part of the same series, are carried down to the level of the base of such pedestal, so that two sets of shafts of different lengths stand side by side. We do not believe that the Greeks, even

as late as the time when this wonder of the world was erected, would have considered such an incongruity admissible.

Of drawings on or close to the line, passing over mere studies for the moment, the following may be mentioned:—*St. Mary's Church, Pulford*, by Mr. JOHN DOUGLAS, of Chester (1230). This frame contains two views, in black ink, of a church of geometrical decorated character, with a nave, low transepts, and a large tower almost entirely detached, crowned by pinnacles, and with an octagonal spire of which the faces are unequal. The design, like everything that comes from Mr. DOUGLAS'S pencil, is very masterly, slightly inclined to be florid rather than severe, but singularly successful. *Collingham Gardens*, by Mr. ERNEST GEORGE (1239), shows four vignetted views, remarkable for the power with which they are drawn and tinted, are included in one frame. If they had been labelled "Scenes from Prague and Nuremberg," few persons would have hesitated at accepting the title, so perfectly do the high-pitched roofs and stepped gables, the vast bays, the many dormers, and the segmental-headed window-heads full of brick tracery reproduce German Mediæval domestic architecture. The question, however, will present itself—Is all this, although so well done, the best attempt the author can make at English nineteenth-century domestic architecture? We are unable to bring ourselves to say that it is.

Mr. J. D. SEDDING exhibits a pen-and-ink drawing of a proposed church for Sunbury-on-Thames (1240). The nave of this church is apparently to be built first, and we are shown the arcade built up, with handsome windows inserted in the filling in, which, we may presume, are ultimately intended to figure as aisle windows; meantime, very dwarfed aisles are proposed. There is a central tower, of which the mass is good, but inconsistent with the details, for the window tracery is Late Decorated, while the forms of this tower are much more severe and early than would have been built in the fourteenth century.

Mr. GEORGE AITCHISON, A.R.A., exhibits the front of a London house, 26 St. James's Square (1242), narrow, tall, and executed in red materials. It is of Renaissance architecture of a rather French type, and, though ornate, not very florid. The carving, of which there are several masses, is not as well drawn as Mr. AITCHISON has accustomed us to expect in works exhibited by him. The upper part of this design, gable and chimney-stack, is the most highly ornamental. The whole is a wonderful improvement on an ordinary London façade. Mr. JAMES BROOKS exhibits a drawing of the exterior of the famous and magnificent church which is the pride of the small and remote Gloucestershire town of Northleach, to show a proposed *Restoration* (1246). The church is a fine specimen of Early Perpendicular, with a very lofty south porch, almost forming a transept so massive is it. The restoration of such a building should be in competent hands if it be undertaken at all, and none better than those of Mr. BROOKS could be found. Mr. BLOMFIELD contributes *A New Parish Church for Portsea* (1255). This church differs a little both in style and treatment from Mr. BLOMFIELD'S usual work, and is hardly improved by the difference. It is Early Perpendicular, but with a higher pitched roof than that style usually recognises, and with a west tower rather deficient in mass as seen from the point of view selected for the drawing.

Mr. R. R. ANDERSON is one of the most valuable contributors to the exhibition, since he sends three important buildings, all good. His *Parish Church, Govan* (1254), represents in a very fine drawing a church of lancet architecture, with a conspicuous tower and spire. The effect of the whole is thoroughly telling, but the architect has relied mainly on his steeple for that effect; and were the spire, or, worse still, the tower and spire, to be postponed for economical reasons, as only too often happens with churches, the simple nave and choir would be but a modest substitute for this noble group. Mr. WATERHOUSE, A.R.A., exhibits *The Principal Staircase of Owens College* (1258). It is vaulted, and the central part of the vaulting is carried by long shafts of richly-coloured material, rising out of the balustrade that divides the two flights. The drawing is one that must have been difficult to make; it shows with great success, and in easy perspective, two flights of stairs—the lower one rising towards the spectator, who is supposed to be on, or rather above, the landing, and the upper one receding from him. The staircase does not appear to be an extremely large one, but is a rich and effective feature of a good building. *Sion House, county Tyrone*, as altered, is exhibited by Mr. W. F. UNSWORTH (1262). This drawing shows a large half-timbered structure of some dignity,



with a good deal of verandah round it, the effect of which is rather disturbing to the character of the general mass. There is nothing to indicate what portion has been altered by Mr. UNSWORTH, but whatever it is, the quality of the design seems well maintained throughout.

The new *Presbyterian Church at Richmond* (1265), contributed by Messrs. WALLACE & FLOCKHART, is a tinted drawing of a Gothic building, with lancet windows, and of a good deal of quiet simplicity, the materials being brick and stone. Enormous buttresses project from the west front, and help to enclose the porch, which is less happy than the rest of the building. Two houses at Hampstead, exhibited by Mr. MAY (1275), are a specimen of the kind of design that prevails at Bedford Park. Parts of the building are not without picturesque feeling, especially the bay window that marks a prominent corner, but the entire absence of grouping or composition or order in the greater part of the buildings is painful. Still the house belongs to a type which is often built, and this circumstance furnishes a fair excuse for giving the drawing prominence, but what motive can have induced the hangers to draw attention to the next work we shall have to mention, it is difficult to conjecture. The *Front Door Gable at Collyers* (1280), exhibited by Messrs. BATEMAN & KEATES, is a carefully-drawn tinted elevation of a brick front. On the ground floor are two ordinary window openings, with square brick heads and sash windows, and some ornament in low relief on the brickwork over the heads. Between these comes a kind of porch, with a semicircular opening, and a second arch, not concentric with the outer one, seen within it. The extrados of this arch is strongly marked, and has an ogive form, very slightly pointed. A mass of black and white colour on small diamonds above this forms a singular patch in the front, and above this occurs a tree of conventional foliage supporting a shield. On the first floor occur two round-headed windows, two round-headed arches, and four half-arches, the whole being surmounted by a heavy gable all but blank. Knowing as we do the merit of some of the drawings not accepted, we cannot but feel wonder that this wild vagary has been hung at all, and that it should be where it is seems little short of incomprehensible.

A small and rather rough sketch of the additions to the Cambridge Union Debating Society's building, by Mr. WATERHOUSE (1283) is too small and too slight to do justice to a building of this importance, and we confess we prefer, both as design and as drawing, the *Turner Memorial House* (1296), by the same architect, which hangs near. This is a harmonious, simple, unaffected Gothic building, with a good deal of quiet dignity, and yet extremely plain and modest.

Mr. F. H. OLDHAM contributes his fine design for the *Nottingham Municipal Buildings* (1292), a very successful example of domestic Renaissance, showing much skill in the handling of the masses of a building. A vast tower with a rich summit marks the corner of the composition nearest the spectator, and from it there falls away on either hand a large pile of lofty and extensive buildings, full of variety, skill, and good taste. The additions to Somerhill by Mr. T. H. WATSON (1306) are shown in a beautiful drawing, and seem to be in good keeping with that dignified old English mansion. In this addition a difficult and even dangerous work appears to have been safely completed, for there is no small risk of damaging a first-rate building by any additions.

A very remarkable drawing, showing the interior of the *Chancel of St. Saviour's Church, Belgravia* (1311), exhibited by Mr. ROMAINE-WALKER, is the next prominent example on the line. The subject is not one that perhaps admits of great originality. The centre of the east wall is occupied by a reredos full of sculpture, and a mural arcade fills up the remainder of that wall and returns along the sides of the choir. All this is well designed and with good taste; but the draughtsmanship is much more remarkable than the design, and in our opinion approaches very closely to Mr. STREET's work in value. This is the best executed pen-and-ink drawing in a collection where almost everything that is good is done in pen and ink, and it will well repay the closest scrutiny.

In *Allerton, Cannes* (1314), we meet with the last of Mr. WATERHOUSE's contributions. It represents a moderate-sized house, of which the special feature is an arcaded loggia in two storeys, which fills up the space between two projections, and no doubt will be delightful in the mild climate of that charming winter resort. Some of the other features are a little crowded, but there is a picturesque window which occupies the end

of the house on the spectator's right, and which strikes us as cleverly designed. Passing several good drawings of decorative subjects, including one by Mr. AITCHISON, to which we shall return hereafter, we come to Mr. CHARLES BARRY's design for the new roof over the quadrangle of the Royal Exchange (1335). This roof is partly arched and partly domed. It appears intended for execution in cast iron and glass, and unless we are carried away by the attractions of a beautifully tinted drawing, we must pronounce it to harmonise well with the architecture of the quadrangle. The last drawing on the line which we have to notice is contributed by Mr. J. G. CRACE. It represents suggestions for the coloured decoration of St. Paul's Cathedral (1345). Mr. CRACE's drawing embodies a series of panels of coloured marbles—or painted to imitate them—to occupy the various panelled spaces now left plain, a good many pictures probably intended for execution in mosaic, and a profuse use of gold, apparently with the hope of fusing together and to some extent toning down these various masses of colour. The effect would no doubt be rich, but we doubt if it would be harmonious, and we cannot call this design, which by-the-by is shown by a beautiful drawing, a systematic or complete plan for the decoration of the metropolitan cathedral.

Among the drawings which we have noted, but which cannot this week be described, are contributions by Messrs. A. W. BLOMFIELD, BIRCH, COLCUTT, MAURICE B. ADAMS, BROOKS, BOURCHIER, EDIS, ERNEST GEORGE, E. J. MAY, F. R. KEMPTON, ASTON WEBB, RICARDO, CAWSTON, STENNING, SHERRIN, LEE, ANDERSON, CARÖE, ERNEST NEWTON, PRIOR, GILBERT SCOTT, HEATON, BUTLER and BAYNE, and HUNT, STEWARD, and KNIGHT.

## THE INTERNATIONAL HEALTH EXHIBITION AT SOUTH KENSINGTON.

FROM an exhibitor's point of view the exhibition at South Kensington has proved immensely popular, for although at one time there was a slight fear, we believe, that the building would not be filled, applications flowed in at the last moment to such an extent that, we are informed, five times as much space as the executive had at their command was applied for. Although this set all doubts at rest so far as the well-filled appearance of the buildings went, it placed the various committees in an awkward predicament. Was the quantity of space applied for in each case to be inexorably cut down, or was a wholesale refusal to be carried out, and the "slaughter of the innocents" to be thus effected? The former course was the one generally adopted, and this again brought fresh trouble upon the executive. Letters of complaint poured in from disappointed firms. Some refused to accept the reduced space, and withdrew altogether, while others, wiser in their generation, endeavoured by appealing to the good feelings of the "ruling powers" to obtain a further "dole." In some instances this was successful, but a want of judgment was apparent in numerous cases in the manner in which the reductions were made. We have received many communications from firms who were disappointed, and whose allotted space rendered it impossible for them to carry out their intended exhibit. In some cases the amount offered was so small as to make it impossible to show even one of the articles required. Here the weakness of those appointed to make the allotments was apparent. The mistake made, in our opinion, was that those to whom this task was relegated were not conversant with the materials with which they had to deal. Three or four individuals acquainted with the different manufacturing interests of the country, conversant with the value of the goods made by individual firms, would have settled this vexed question in an easy manner. Firms whose productions were of least moment would have been at once refused, and others, where merit was known to exist, would have had reasonable room allotted to them. We can well understand the desire of many to obtain an *entrée* to the Health Exhibition, which virtually means a shop free of rent and taxes for five or six months, with the certainty of having thousands of visitors daily of all classes—an advantage not attainable except by similar undertakings. But it is too late to offer suggestions now, and we must take the exhibition as we find it. At the time we write, although publicly opened, it is far from being in a complete state; but this backwardness is



more the fault of exhibitors than of the executive. Why is it that exhibitors make such a distinction between at home and abroad? In most foreign exhibitions we have been accustomed to see the English section ready even before that of the nations in which they were held; but at home a sort of *laissez faire* feeling too often takes possession of them and is to be highly reprehended.

The exhibition is composed of two great divisions, the first being named Health and the other Education. It is, however, almost needless to add that the latter division is made to represent the hygienic feature as much as the other. The first-named division is subdivided into several classes, embracing foods of most kinds in their raw, prepared, and cooked forms, dress, the dwelling-house in all its details, ambulance, hygiene of the school and workshop, and meteorology as it applies to the study of public health. Medicines, as they are generally understood, are strictly excluded, the dictum of the executive being that this is a "health" and not an "out-of-health" exhibition. But in some of the prepared foods and dietetics, and even temperance drinks, a critical mind may fairly consider them as medicines in disguise; and in our thinking a very fine line indeed may often divide the two. The second division contains classes ranging over all the appliances of the teacher's art: instruction in domestic economy for girls; elementary training in handicrafts for boys; science and art teaching; the fitting up and conduct of technical and apprenticeship schools; apparatus and examples for teaching the blind, the deaf, and the dumb; school museums. There are one or two objects that the critic may urge has nothing to do with health, the principal one being the old London street, and another the fountain erected by the London water companies, lighted at night by the electric light; but as both of these will form great attractions, particularly the former, and as no doubt a double object has guided the promoters, we are not disposed to cavil with them.

In the old London street we are introduced to a good illustration of Early English domestic and ecclesiastical architecture. This thoroughfare, with its quaint gabled houses and somewhat picturesque shops, is approached at one end by a Gothic archway representing one of the old City gates, Bishopsgate, and at the other end is a church and monastery of Mediæval London. Each of the shops is under the direction of one of the City companies, and various handicrafts when all is in order will be carried on in them, which we shall revert to on a future occasion. Above the arch of Bishopsgate are the arms of the City of London and those of the bishopric, and over the gate in a niche is the statue of Bishop WILLIAM the Norman. Upon the towers that flank the gateway are statues of ALFRED and his son-in-law ELDRED, Earl of Mercia. On the other side of the gate is a statue of St. ERKENWALD, fourth Bishop of London, A.D. 675. A debtor's prison is shown on one side and a "lock up" on the other, both on the ground floor, staircases leading from them to the first floor. The first house through the gateway to the left is the Rose Inn, the front covered with small cut slates, the next house being a correct copy of the original Cock Inn, Leadenhall Street. Very few if any of these old hostelries now remain, except here, and there in very obscure places. In the next block we are introduced to the Three Squirrels, which stood upon the site in Fleet Street now occupied by GOSLINGS' bank. In the ironwork of the Bank windows is still to be seen the sign in question. It is of course generally known that the old London bankers were also goldsmiths, and at the Messrs. CHILD's, close to where Temple Bar stood—the oldest banking-house in London—its sign of the Marigold is still preserved; and HOARES' bank (1693), was familiarly known by its sign of the Golden Bottle. We have now approached ISAAC WALTON's house, a fine specimen of a citizen's house in Queen ELIZABETH's time, and for many years afterwards a conspicuous feature in Fleet Street. Two smaller houses standing back from the main street next arrest our attention. They are two unpretending wooden structures from beside the ancient church of St. Ethelburga, Bishopsgate Street Within. The old tower of All Hallows Staining stands in an adjoining position prominently in advance. The church was called "Stane Church," to distinguish it from others in the City originally built of timber.

We are then taken to the neighbourhood of the Strand, almost within sight of our own office, and introduced to a portion of an old street known as Butcher's Row. This street formed a very narrow one between the rear of St. Clement's,

as Holywell Street was once called, and Ship Yard in the Strand, and, it is almost unnecessary to add, attained its name from being a row of butchers' shambles. It is said that in one of these houses the conspirators of the Gunpowder Plot met to concoct their horrible project. The buildings are represented from original drawings, with the overhanging upper storeys so prevalent in London and other parts of the country at that and previous dates.

A large house with two gables, No. 11 and 12, is a conspicuous feature in this thoroughfare of typical dwellings. It is a facsimile of that occupied by one of the French ambassadors, the Duke DE SULLY. This nobleman was the famous HENRI DE BÉTHUNE, Minister of HENRI QUATRE, King of France and Navarre. At the time he was accredited to our Court, and when living in this house, the walls were decorated with badges of his family, the French crown and the fleur-de-lys.

The next feature is a reproduction of a portion of Bishopsgate Street, being a low structure of wood and plaster taken from an old engraving. We would remind the committee that a house of ancient date still exists in Bishopsgate Street Without, of which a portion of the front and the upper storeys remain for the most part in their original state. This house was originally inhabited by Sir PAUL PINDAR, and to the writer's knowledge for the last half-century (and how long anterior he has not thought it necessary to inquire) has been used as a tavern, bearing the name of the worthy knight. The lower portion has been "modernised," but the first floor, with its overhanging storey, still retains panels of Tudor design. We think it would not have been amiss to have produced the original of this once-noted domicile.

We now arrive at an old house as it originally stood in Goswell Street. Stow says of this thoroughfare that it was a street "repleshished with small tenements, cottages and alleys, gardens, banqueting-houses, and bowling-places," and, standing as it did but a short distance from Aldersgate, was no doubt much frequented by some of the citizens for a little relaxation and pastime when a more lengthened walk was not desirable. This house is of the Elizabethan period, with mullioned and transomed windows. The adjoining house stood on the south side of London Wall, and the next is a half-timbered structure from Sweedon's Passage, Grub Street—the Milton Street, Cripplegate, of the present day. Two houses from King Street, Westminster, come next, and are good specimens of timbered dwellings, with carved bay boards. It is said that OLIVER CROMWELL resided in one of these in his earlier days, when present in London for his Parliamentary duties. The last on the left is a copy from one in Little Tower Street, apparently a very old structure, with a level instead of a gabled roof, and is decorated with medallions of certain Roman emperors. The old house with its galleried front is the Oxford Arms, Warwick Lane, where the old stage-coaches started for Oxford on Mondays, Wednesdays, and Fridays, according to an announcement in the *London Gazette* of 1672. Next follows a portion of old London Wall, which encompassed the City, and was about two miles in extent.

A specimen from Moorfields follows, which it will be remembered was situate just outside the City gates. The next feature is a block of houses that were standing up to the year 1800 at the corner of Hosier Lane, Smithfield, not far from Pye Corner, where the Great Fire of London in 1666 was arrested in its ravages. An old saying was once popular that the fire commenced at Pudding Lane (in Eastcheap) and ended at Pye Corner. In the days of Bartholomew (or Bartlemy) Fair, as it was commonly called, this neighbourhood was a place of great resort.

We are now transferred to the purlieu of Aldgate, and are introduced to the priory gate of the Church of Holy Trinity, which stood near the corner of the Minories, founded by MATILDA, queen of HENRY I., in 1108. It was pulled down and rebuilt in 1706, having become dangerous. History says that the precincts were given to Sir THOMAS AUDLEY, who became Lord Chancellor, by HENRY VIII., who died there in 1554. The estate was afterwards inherited by the Duke of NORFOLK, who married a daughter of Sir THOMAS's; and in the year 1662 the inhabitants of Duke's Place, as the precincts were then named (that of late years has reeked with the smell of oranges, for the sale of which it became famous), having a quarrel with the parishioners of the Church of St. Catherine Cree, secured leave from King CHARLES to rebuild the Priory Church. We are still accredited to the eastern part of the



City, or rather outside it, and our attention is next arrested by a *quainte hostellerie* called the Fountain Inn, situate in the Minories, and supposed to have been built about the year 1480. The Hall of the Brotherhood of the Holy Trinity forms the next feature in this typical collection, but the gable end only has been reproduced. This hall until 1780 stood in Trinity Court. It was first founded in the year 1377 by that unfortunate monarch RICHARD II., as a fraternity of St. Fabian and St. Sebastian. It was afterwards licensed by HENRY VI., and suppressed by EDWARD VI. Afterwards we reach a house the name of whose owner is something more than a household word with every man, woman, and child of English birth. Even now almost verging upon the "seventh" stage, we can recall the delight and wonder we experienced the first time the tale of DICK WHITTINGTON fell upon our astonished ears. Many will be the little prattlers that will be taken during the next few months to view this wood-and-plaster replica of the house in which the great and wonderful Sir RICHARD WHITTINGTON is said to have resided when he retired from active life, and carried out his benevolent undertakings. He is said to have held court in an almost regal manner, but for the benefit of the poor and afflicted alone. The house stood in Hart Street, Mark Lane, where still may be one or two dwellings of rather ancient date. And now we have almost reached the end of this historical thoroughfare. There are yet three houses to be seen, two of which were only recently removed from High Street, Borough, and another stood in Bankside, where at one time Swan Theatre was located, but they are not associated, so far as we know, with any historical reminiscences. We now emerge from this Medieval avenue, and again mingle in the surroundings of the nineteenth century. This show street has not been built for the benefit of the archæologist or the historian, but for the million, and to bring grist to the mill, and in this latter object no doubt it will be eminently productive. The committee have had the aid of Mr. BIRCH in preparing the designs for the buildings. The structures have been erected in the incredibly short space of six weeks by Mr. WILLIAMS, with Mr. W. G. SUTTON as clerk of works. The painting is by Messrs. CAMPBELL & SMITH.

In other parts of the exhibition various manufacturing processes will be carried on, and a large portion will be relegated to cookery, and a Chinese tea-garden, restaurant, and shop are amongst the novel attractions in this department. Three model kitchens are also fitted up, comprising a high-class one, suitable for a club-house or large mansion, which has been undertaken by Messrs. BENHAM & SONS, of Wigmore Street; and we know of no firm more capable of carrying out such an undertaking in an effective manner, the only difficulty they have had to contend with in giving full force to their wishes being the small space allotted them. The next, intended for a middle-class household, has been placed in the hands of Messrs. BROWN & GREEN, of Luton and Finsbury Pavement, who obtained the gold medal at the Smoke Abatement Exhibition, for their principle of under-feeding as applied to kitchen ranges and other grates. In this kitchen a flooring of a very durable and cheap mosaic, practically imperishable, that can be supplied at as low a price as the commonest tiles, has been laid down by Messrs. DIESPEKER & Co., of the Holborn Viaduct.

The dwelling itself will be illustrated in various ways. The "flat" system, until late years confined exclusively in our island to Scotland, is gradually feeling its way into the metropolis, and amongst an expensive class of dwellings; while our kinsmen north of the Tweed are building, year by year, more "self-contained houses," as they are pleased to call an independent house, and so the whirligig of time produces its changes. These arrangements are shown, and also models of other kinds of houses, from the mansion to the cottage. The sanitary and unsanitary features, now a popular theme, is duly set forth, and interior decoration, all professing to be hygienic in character, is displayed.

Although there are many foreign exhibits intermixed with our own, France and Belgium appear to be the only two nations whose Governments have responded to the call and have separate courts, if we except the Indian collection, which may be almost called a portion of our own. Probably the well-known deficiencies that exist in Continental nations as regards sanitary matters may have deterred them from entering the lists, but monetary considerations may also have had their weight in bringing about the result. In the French court a

large building, named "La Ville de Paris," illustrates by diagrams and models the Parisian sanitary arrangements.

Entering the eastern avenue, we may almost fancy we are in the midst of the Smoke Abatement Exhibition of 1881-82, for this portion of the building is again relegated to these appliances, and on all hands we recognise old faces and old exhibits, besides several that are new, but, like the rest of the exhibition, we must deal with these in detail at a future date.

A meritorious feature is the special department (although most here have that appellation) set apart for the workshop, in which is contained apparatus, fittings, and models of the various articles intended for the use of the workpeople who labour in unhealthy trades. If our artisans would generally adopt all the appliances that have been invented for their safety and the preservation of their health, there would be far less loss of life and chronic illnesses than now exist; but we know too well that the old proverb "familiarity breeds contempt" is as rife amongst our workers in dangerous and unhealthy trades as ever, and until a greater amount of common sense can be instilled into them, the efforts of philanthropists and humanitarians will lose half their effect.

There is one section of the exhibition to which the female portion of the community will flock in their thousands, and that is dress. Except from an artistic point of view we shall not, even in our future notices, attempt to dive into this, to us, almost sacred province of unknown quantities and mysterious adjuncts. Dress, from the time of the Conquest to the present day, embraces a wide range, but it is illustrated by means of figures, representing the "high born ladye," and (may we use the term?) plebeian, or peasant. These costumes have been designed by Mr. LEWIS WINGFIELD, and a collection of naval and military dresses from the Saxon age to the present period, on lay figures, is under the charge of General ERSKINE. It must be said that this department will disappoint archæologists. The "dummies" which are used are very ugly, and the dresses do not sit well. In many cases the materials are flimsy, and more satisfactory notion of ancient costume would be obtained from one of the large French or German books on the subject.

The electric lighting will also prove a great attraction, and will undoubtedly surpass the beautiful display of last year. Altogether there will be about 5,000 incandescent, and from 300 to 350 arc lights, and there will be, we believe, some novel features in connection with the lighting shown. The central object in the display will be the magnificent electrolier containing 99 lamps, manufactured by B. VERITY & SONS, King Street, Covent Garden, for the Electrical Exhibition at the Crystal Palace three years since, and that was the subject of so much comment on that occasion. This beautiful work of art is made of brass, the principal parts being all of hammered metal. The incandescent lamps are covered by coloured glasses representing the flowers of the blue-bell. It has been lent by the firm to the Edison Company, and is hung in the vestibule, but a short distance from the principal entrance, over which it will shed a flood of radiant light. More than 20 patentees and companies will, we understand, be represented with their different systems of lighting. On the present occasion we shall not attempt to give detailed descriptions of any of the exhibits, for although something like cleanliness and order existed at the opening, but few out of the great mass of exhibits are complete. But we must not close them without mentioning the magnificent pavilion and the corridors of Messrs. DOULTON, of Lambeth. These veritable works of art will be one of the most striking features in the exhibition. Everything composing these structures, including pillars, walls, steps, and floors, are of pottery-ware manufactured and painted at Lambeth. To attempt to describe these works at the present moment would be alike unjust to the firm and would be an incomplete record; but we have no hesitation in saying their like have never been seen before.

We must compliment the executive on their determination to exclude all those itinerant vendors that too often appear as plague spots and excrescences at most large exhibitions. Miscellaneous exhibits are certainly to be found, but they do not partake of the character of those we allude to. We have no feud with these people; they have to obtain their living as well as the most legitimate manufacturer, but we have always contended that they are not only out of place at such an exhibition as this, but are a nuisance to the legitimate exhibitor, and are certainly not required at South Kensington. There is yet another subject to which we desire to call attention, in



which the wisdom of the executive has been brought prominently forward. Medals of gold, silver, and bronze are announced to be given.

Everyone who has any knowledge of exhibitions is fully aware that the granting of awards often proves a thankless office to jurors, is productive of heart-burnings among exhibitors, and entails an amount of annoyance to the executive. He who can solve the problem to prevent this will prove a benefactor to all concerned. The committee are evidently fully alive to this, and have adopted a novel but ingenious plan that may rid them of a little of their responsibility. We in common with many others contend that jurors have often been selected on account of their scientific attainments. We are free to admit the value of science in such cases; at the same time we are equally certain that gentlemen of practical manufacturing knowledge should be imported into the council of jurors. Who are so capable of forming an opinion as to the make, quality, and action in use of various appliances as men whose business-life has been devoted to the study of such appliances? Such individuals must prove of great assistance to the scientific section, and should enable a better decision to be arrived at. At many International Exhibitions this idea has found favour, and we are pleased to find that an opportunity has been offered for its adoption here. Circulars have been sent to all exhibitors, asking them to name three gentlemen who, in their opinion, would be the most suitable men to judge of the value of their productions. No names are given as a nucleus to select from, but they are free to mention any one they please; but a committee has been formed to pass their opinions on such selections, and to endeavour to obtain a trio in each class in accordance with the wishes expressed. Now, if exhibitors send in suitable names, and such gentlemen agree to accept the office, a great load of responsibility is removed from the executive, and in fact exhibitors are offered the privilege of selecting their own jurors. If with this concession a competent list of judges is not secured, it is mainly the exhibitors' fault. They cannot blame the committee, and we shall have no sympathy with them if they complain of the awards.

### ILLUSTRATIONS.

AN OLD MANOR-HOUSE.

THIS illustration is a reproduction of a pen-and-ink drawing by Mr. JOHN LANGHAM, architect, Manchester, which is now in the Royal Academy. The style of drawing is characteristic of the author, and it is needless to say that the composition is imaginary. The illustration is nearly of the same size as the original.

HIGH ALTAR, ST. CATHERINE'S CHURCH, WEST DRAYTON

ST. CATHERINE'S Church was erected in 1869, from the designs of Mr. S. J. NICHOLL and Mr. T. J. WILLSON, then in partnership, but, owing to want of funds, very much had to be left incomplete, and it is only of late that the Rev. Mr. WREN has been enabled to proceed with the gradual completion of his work, the making of the designs being, by friendly arrangement, entrusted to Mr. S. J. NICHOLL. The baptistery and font, the Chapel of the Sacred Heart, and the Lady Chapel, all carefully designed in harmony with the style of the church, are finished, and the design now illustrated is for the high altar. The drawing is exhibited in the architectural room of the Royal Academy this year. The materials are stone, marble, and alabaster, with sculpture and paintings, enriched with gilding and colour and hangings of drapery.

HOUSE, BARKING ROAD, LONDON.

THE shape of the site of this house being triangular, and the building line 20 feet from the frontage, made it desirable to keep the building of as little depth as possible. The end of the drawing-room forms a large bay, terminating in a circular roof, and there is a small conservatory or fernery, with openings to drawing-room and hall. The staircase is triangular, with a polygonal landing towards the garden, the newel running from the top to the bottom of the house, and supporting flat domes under the landings. The materials proposed to be used are dark red bricks of the Woolpit Company for the walls, the roof covered with strawberry and brindled tiles made by the Madeley Wood Company. Inside, the ceilings will in nearly

all cases be of wood, with small ribs to form patterns; where plastered HITCHIN'S material will be used. The whole of the woodwork will be executed by Mr. C. WOOD, of the Crown Saw Mills, for whom the house will be erected, from the designs and under the superintendence of Mr. WILLIAM G. B. LEWIS, architect.

GLADSTONE BUILDINGS, SHEFFIELD.

THESE buildings are being erected by the "Gladstone Buildings Company, Limited" (formed by the local adherents of Liberalism), and will afford accommodation for the "Reform Club" and the "Liberal Association." The site is very eligible, situate in one of the principal thoroughfares, and overlooking the churchyard of St. Peter's. The buildings have been designed by and are being erected under the superintendence of Messrs. HEMSOLL & SMITH, architects, of Sheffield.

The Reform Club entrance is from St. James's Row, and leads into a spacious vestibule which is commanded by a porter's-room. The staircase and hall is divided from the vestibule by an arch and columns. On the right of the staircase are the lavatories, &c. The principal rooms on the first floor are reached by the staircase, and comprise a reception-room, 18 feet by 12 feet; dining-room, 43 feet 6 inches by 23 feet 6 inches; reading-room, 31 feet 6 inches by 21 feet (these two latter being capable of forming one large banquetting-room); writing-room, 17 feet 6 inches by 12 feet. The second floor embraces billiard-room, 43 feet 6 inches by 23 feet 6 inches; smoke-room, 31 feet 6 inches by 21 feet; library, 18 feet by 17 feet, and connected with both floors are the necessary serving-rooms, cloak-rooms, &c. The third floor is occupied by dressing-rooms, bath-room, and the administrative departments. Card-room, private dining-rooms, secretary's-room, &c., are provided on mezzanine floors.

The Liberal Association rooms, which occupy portions of the first and second floors, are entered from St. James's Street, and consist of a reading-room, 24 feet by 19 feet 6 inches, with writing-room attached; executive-room, 23 feet 6 inches by 19 feet 6 inches; meeting-room, 39 feet by 19 feet 6 inches, secretary's-room and waiting-room, lavatories, &c.

The ground floor (except where entrances as before named) is occupied by five shops or offices and by a restaurant, and the basement by a public billiard-room for six tables, with service bar and lavatory accommodation attached.

### THE SURVEYORS' INSTITUTION.

THE following candidates have passed the recent professional examinations:—

*Student Candidates for the Associateship.*—Harry Barratt, of Stourbridge; Robert Alan Benson, of the College of Agriculture, Downton; Walter de Hoghton Birch, of the College of Agriculture, Downton; Bernard Simon Dunning, of the College of Agriculture, Downton; John Henry Mead, of the College of Agriculture, Downton; William Timothy Hall, of Maidstone; John Baseley Selby, of Mornington Road, Regent's Park, N.W.; Edward Mixer, of Shepherd's Bush, W.; Thomas Willard, of Rugby. Of these candidates, William Timothy Hall receives the "Institution Prize" of 15*l.*, having obtained the highest number of marks (over 500) of any student candidate; and Robert Alan Benson and John Baseley Selby (bracketed equal), prizes of 10*l.* each, as second in order of merit among the student candidates.

*Non-Student Candidates for the Associateship.*—Thomas Arthur Dickson, of the Agricultural College, Cirencester; Edward Greenop, of Brixton Rise, S.W.; William Redford Halkyard, of Knutsford; Robert George Petre, of Chelmsford; George William Sadler, jun., of Cheltenham; Theodore Sturge, of Bristol; James Bruce Watson, of Tetsworth, Oxon; Jonas Marshall Webb, of Cambridge. Of these candidates, Jonas Marshall Webb receives a prize of 15*l.*, being first in order of merit of the non-student candidates.

The following candidates, who have previously passed the Associateship examination, have been successful in passing the Fellowship examination:—Charles Herbert Bedells, of John Street, Bedford Row; Henry Johnson, of Walbrook, E.C.; William Gustavus Stanhope Rolleston, of Leicester.

The following non-Associate candidates have also passed the Fellowship examination:—Alfred Mitchelmore, of Totnes, Devon; James Winder Peto, of Ixworth, Suffolk; William Smith, of Salford Priors, Evesham.

Making, together, 17 candidates who have passed the examination for the Associateship, and 6 candidates who have passed the examinations for the Fellowship, or a total of 23 successful candidates out of 36 who presented themselves for examination.



## THE CONFERENCE OF ARCHITECTS.

THE triennial Conference of Architects opened on Monday afternoon. Mr. Horace Jones received the members of the Institute at the rooms of the Institute. There was not a large attendance in the afternoon. On the walls of the west gallery some working drawings were hung, which gave opportunity to contrast the styles adopted by the late G. E. Street, R.A., the late W. Burges, and the late E. E. Viollet-le-Duc.

In the evening the fiftieth annual meeting was held, when the Report of the Council was presented and the officers were elected for the ensuing year. Mr. Barry, in moving the adoption of the Report, dwelt at some length upon the satisfactory state of the Society, socially and financially, as indicated by the steady maintenance of the number of professional members, now 1,100 in all, and by the cheerful character of the accounts, the ordinary annual expenditure being about 3,300*l.*, with a balance to spare. He also alluded to the advance of the principle of examination, and to the disposition manifested by the general body to insist upon reforms in the management, to which, although he himself held strong opinions, he loyally yielded, regarding the Council as the honoured servants of the Society, bound to carry out its wishes. Mr. Barry also regretted the absence from the Institute of the gold medallist of the year and several other very eminent architects, and went on to speak of the unreadiness of the Metropolitan Board to accept the advice of the Council under the provisions of the statute with reference to Northumberland Avenue; and lastly adverted to the labours of the Competitions Committee in the endeavour to establish the rule of professional adjudication as one means at least of improving an "abominable system." Mr. Fowler, of Louth, seconded the motion, and spoke of the want of interest excited amongst provincial architects. Mr. Cole Adams, being called upon, gave some information with regard to the work of the Competitions Committee, from which, however, he did not seem to expect very great results. Professor Kerr spoke in approval of the report, and said that after the observations of Mr. Barry, coupled with what had fallen from Mr. Cates recently, he hoped that no further necessity would arise for discussing a point of principle which involved a little unpleasantness. But at the same time he hoped the report would never again open with the statement that the Council presented it "for the information of the meeting;" it was presented for confirmation and approval. Mr. Kerr then called for a special recognition of the liberality of the President, Mr. Horace Jones, in his having taken upon himself the whole of the not inconsiderable expenses of last year's *conversazione* at South Kensington Museum. As regarded the Transactions, he complained of the small amount of business done, and remarked that, in the case of the Conference now opened, a little organisation seemed to provide almost as much intellectual work for one week as would serve the Institute for a whole year. When Mr. Barry complained of the absence of certain eminent men, and Mr. Fowler spoke of the apathy of the country architects, he considered that both of these shortcomings might be met. The elevation of the intellectual standard of the work of the Institute was the way to attract all men of eminence; and, as for the provincial practitioners, the way to secure their adhesion was to advance in liberality of management, in the direction of equality and fraternity, and he strongly recommended the adoption of some plan whereby, charter or no charter, every member of the body should have his vote received. After some remarks by Mr. Charles Fowler on the accounts, the report was adopted. The elections were then proceeded with, and Mr. Christian was elected president, the vice-presidents being Messrs. Brandon, l'Anson, and Waterhouse, and the ordinary members of Council the whole of the previous members, with the addition of Mr. Aitchison, A.R.A., Mr. Fawcett of Cambridge, and Mr. Cole A. Adams.

## TUESDAY, MAY 6.

It can hardly be said that the objects of the visits which were set down for Tuesday were well selected. In the three cases the works were in progress, and it was therefore impossible in the short space that was allotted to obtain a clear notion of what was to be accomplished. The explanations that were offered could only be heard by a few. If a little foresight had been exercised, and if printed descriptions had been handed to the visitors, or if the architects had obtained the assistance of some of their friends to act as guides, a good deal of information might have been obtained. But, as usual, everything was left to chance, and there was in consequence the usual amount of grumbling among the country visitors who had been induced for the first time to attend a conference.

The Guildhall Council Chamber is a twelve-sided Perpendicular hall, and, when completed, will be likely to answer for meetings. Whether it is ever to be occupied as a Council Chamber is uncertain. The windows are filled with stained glass, the roof will be coloured and gilded, and all that money could obtain will be found around. The workmanship is creditable to the contractors, and the design is rigidly correct in the details. But it was impossible to give any notion how far a speaker's voice will be heard

in the hall, or on how many days it will be necessary to employ gas or the electric light. The galleries are reached by winding stairs, and the channels which are cut in the newels will be great temptations to young folks, if any are admitted. Afterwards the visitors were led to the Corporation Library and Museum, two places which are open to the public throughout the year.

The new building of the Stock Exchange was next visited. It is farther from completion than the Council Chamber. The principal feature will be the great hall, which eventually will have an area of 16,000 square feet. The walls are covered with marble slabs, but the spaces are so large that the use of the material appears to be mere ostentation of wealth. If a less lavish use had been made of the marble its value would be enhanced, and the appearance of the wall surface would be less monotonous. The hall will be covered with a domed roof. It will rest on a ring, formed of a wrought-iron rivetted girder about 2 feet 6 inches deep, which is carried all round the hall. The ribs will be of cast iron, and the dome will be covered with copper, for it appears that the members of the Stock Exchange have an aversion to sunlight. The roof has been designed and constructed by Mr. Dawney, C.E., and, judging from tracings which were exhibited, it will be an excellent example of engineering. The upper part of the hall is in hard Portland and Daubigny stone. The carving of the Italian ornamentation is now being done, mainly by foreign workmen, and is bold and good in style. The contractor for the works is Mr. George Shaw, and Mr. J. J. Coles is the architect.

In the afternoon the works of the District Railway Extension were visited, and the journey under Cannon Street was attended with more or less discomfort. Here again the time was insufficient, but probably it did not matter so much, as similar works are never likely to be conducted by architects. The great difficulty in constructing the railway was to avoid expensive interference with the superstructure of the houses along the route, and it is well known that in order to be prepared for contingent litigation, photographs on a large scale were taken of the buildings in Cannon Street, so as to enable the Company to give evidence with regard to settlement. The construction of the line under the court of the Cannon Street Station, and under the statue of King William IV. is the part of which the engineers and contractors appear to be most proud.

The second meeting was held in the evening in Conduit Street, Mr. Charles Barry presiding, when the following paper was read and discussed:—

## Architects, Clients, and Contractors.

By ARTHUR CATES, F.R.I.B.A.

When drawing up the programme of the proceedings of this Conference, the committee considered that "the duties, obligations, and mutual relations of architect, client, and contractor with reference to both English and foreign practice," would form an excellent subject for discussion at one of the meetings. They accordingly prepared a series of questions which were addressed to correspondents of the Institute, with the result that replies have been received from Professor Fenger, of Copenhagen, Th. Ritter von Hansen, of Vienna, and Herr Ende, of Berlin.

Communications respecting the practice in America have also been received from Mr. Sydney Smirke, who practised for many years in America, and who will, I hope, be present here this evening, and favour the meeting with his observations on those points in which American practice differs from ours.

At the request of the committee I have read these communications, and summarised them in such a manner as will, I hope, satisfactorily open the discussion.

For France I am indebted for much information to Mr. W. H. White and Mr. R. Phené Spiers, and have referred to some of the leading text-books on French building legislation, more particularly to "Manuel des Lois du Bâtiment," published by the Société Centrale des Architectes; Frémy Ligneville, "Traité de la Législation des Bâtiments," 2 vols., 8vo., 1881; O. Masselin, "Nouvelle Jurisprudence et Traité pratique sur les Honoraires des Architectes," 8vo., Paris, 1879; O. Masselin, "Nouvelle Jurisprudence et Traité sur la Responsabilité des Architectes, &c.," 8vo., 1879.

I must admit that when the questions settled by the committee were first placed in my hands, I was somewhat startled by the wide range they covered, which seemed to me likely to require a whole conference, or even a series of conferences for their complete discussion. As, however, the time at our disposal this evening is but limited, and the object of the meeting is to afford those who attend an opportunity of expressing their views and discussing points of general practice, I will, as shortly as possible, bring before you the replies which have been received.

Happily, the first question, which relates to the tenure of land for building purposes, has been thought to be of sufficient importance to have an entire meeting appropriated to its consideration, and to-morrow (Wednesday) morning Mr. Blashill will read a paper thereon.

## Position of Architects on the Continent.

The next series of questions relates to the architect, and it will be convenient to consider each separately. Thus:—

When an architect is employed upon the erection of a house, is it usual for him to perform the following services?—(a) Preparing



all the drawings that are required, and a specification of the works ; (b) Arranging terms with the contractor or contractors ; (c) Superintending the work ; (d) Deciding on the amount of money that is to be paid to the contractor or contractors according to the terms and dates of payment.

To this the reply from Copenhagen is the simple affirmative, Yes ; but in Austria the architect's duties appear to be somewhat more extended, as beyond those set out in the question he prepares an accurate estimate of quantities of the building to be executed, from which the contractors can ascertain the quantities of the several descriptions of work.

A similar practice appears to exist in Germany, and in France the preparation of the *Devis estimatif* is one of the duties of the architect, and is included in the services covered by his commission ; but on this head more particulars will be given when the tariff of charges under which German architects work and the remuneration of French architects is considered.

To the third question—Does the architect usually perform any other services?—the reply is in each case, No.

4. Is his decision as to the quality of the work and material, and as to payments, final and binding?—is answered, in accordance with ordinary English practice, with the proviso, as regards Austria, that if the contractor desires in such cases to appeal to a legal tribunal, the right of doing so must be expressly stipulated in the contract ; while in Germany it is often stipulated in the contract that in cases of dispute one or more arbitrators shall decide the question at issue.

5. Is the architect responsible to the client for any losses that may arise through bad work or materials which he ought to have checked ; and if so, for a limited or unlimited time ?

It appears that in Denmark this responsibility has not hitherto been exactly defined by law or by custom, but if losses have been suffered through the architect's neglect or liability, the employer may sue him for damages within the first twenty years. The reply from Vienna is vague, and to the effect that the contractor is held responsible for, and to make good, loss through bad work or bad material. The Architectural Association of Germany has the responsibility of the architect to the client at present under consideration, but no decision has been arrived at. There the tradesman is responsible to the architect as well as to the client for the goodness of the work. In doubtful cases the architect leaves the selection of the tradesman to the client, thus giving the latter an influence by which he cleverly diminishes his own responsibility. No instance is known to Herr Ende in which an architect has had to bear the responsibility for the shortcomings of a tradesman. Every architect is legally answerable for his designs so long as these are followed. Where a tradesman deviates from the instructions of the architect, the latter assumes the responsibility if he sanctions deviations in a general way. If the architect is demonstrably lax in his supervision, of course the law holds him responsible.

In France and those countries subject to the Code Napoléon the responsibility of architects and contractors is defined by six articles of the Code Civil, four of which are of general application, while Art. 1,792—"Si l'édifice construit à prix fait, péricule en tout ou en partie par le vice de la construction, même par le vice du sol, l'architecte et l'entrepreneur en sont responsables pendant dix ans"—appears to make the architect and contractor liable for ten years ; and Art. 2,270—"Après dix ans, l'architecte et les entrepreneurs sont déchargés de la garantie des gros ouvrages qu'ils ont faits ou dirigés"—relieves the architect and contractor from liability after ten years.

#### *Responsibility of Foreign Architects.*

There has been considerable controversy as to the exact meaning of Art. 1,792, it being contended that it is only applicable where the architect is the contractor ; but, nevertheless, the responsibility attaches to the architect under the general principles of Art. 1,382 :—"Tout fait quelconque de l'homme, qui cause à autrui un dommage, oblige celui par la faute duquel il est arrivé à réparer" ; Art. 1,383 :—"Chacun est responsable du dommage qu'il a causé, non seulement par son fait, mais encore par sa négligence ou par son imprudence" ; and Art. 1,992 :—"Le mandataire répond non seulement du dol, mais encore des fautes qu'il commet dans sa gestion," which make him, in common with all other citizens, liable for the results of faults he may commit, and those he may by negligence or otherwise permit others to commit over whom he may have authority. For errors of design and want of skill resulting in failure of the building wholly or in part, neglect of legislative enactments and municipal and police regulations, neglect of servitudes and easements to which the site is subject and which the architect could have ascertained, providing a building which does not satisfy the defined requirements, the client has his remedy against the architect alone. For improper execution of work, defective or improper material or workmanship, the client's remedy is against both contractor and architect—against the one for having committed the wrong, and against the other for having by inefficient superintendence permitted it ; but the architect himself has his remedy against the contractor. These responsibilities have many qualifications arising from the varying

relations of the parties, but it would not be possible to enter into such details on this occasion.

The limit of ten years does not apply to cases of fraud : in these the term of prescription is extended to thirty years. In England the Statute of Limitations being seven years, it would appear that the architect is in ordinary circumstances protected after the lapse of that period.

#### *Scale of Foreign Fees and Measure of Professional Work.*

6. On what basis is the architect's remuneration calculated, and is this settled by any law or custom ?

The Danish architects have not yet agreed upon a schedule of remuneration, but often use the German and Swedish schedules, which will be found in the report of the Congrès International des Architectes, Paris, 1878. In Austria the terms of professional remuneration are not fixed by law, but the Architectural Association has drawn up a certain scale of charges. It is, however, optional with the architect and client whether they accept this or not. As a rule professional remuneration is calculated at from three to five per cent., according to the nature of the work. In Germany a very elaborate tariff is adopted which was drawn up by the Architectural Section at the Fifteenth Congress of German Architects and Engineers, held at Hamburg in 1868. The ordinary work of the architect is there divided in five classes, commencing with ordinary agricultural buildings and the plainest description of town and country dwellings, and ending with exterior and interior decorations and ornamental work. The scale of remuneration is set out under six subdivisions of the architect's work and nine progressive stages of cost, the first limit being 300*l.* and the highest 30,000*l.* and upwards.

The services to be performed by the architect are defined as :—

- (a) *Sketches*.—Preparing sketches (plans and elevations) drawn to scale, and (if desired) an approximate summary estimate of cost.
- (b) *Design*.—Preparing complete design, with plans, elevations, and sections, together with a summary estimate of cost as for (a).
- (c) *Working Drawings and Details*.—Preparing the requisite working drawings and the detail drawings of construction and decoration.
- (d) *Estimate of Cost*.—Preparing a special estimate of cost of construction.
- (e) *Execution*.—Drawing up contracts for, and letting and general superintendence of, the execution of the whole of the works, exclusive of special superintendence.
- (f) *Accounts, &c.*—Checking and certifying the accounts, exclusive of measuring up.

For works of smallest cost the rate per cent. for the entire services varies from 5 per cent. on the smallest expenditure for the lowest class of building to 9½ per cent. for a like expenditure on the highest class of building ; while for works of greatest cost the rate of remuneration varies from 2 per cent. on the largest expenditure for simple buildings to 5 per cent. on those of the highest class. Fees on rebuilding or additions to existing buildings where a special design is necessary are calculated at one-fourth more, and where a design is not necessary at one-fourth less than for the same class of new work. Advances on account during the work, in proportion to the progress of the work and in accordance with the rules, shall always be paid to the architect on demand. If the estimate be exceeded such excess shall not increase the fee, but the cost of duly sanctioned extensions or more sumptuous treatment of the work shall increase it. All drawings remain the property of the architect. The client may demand copies of the design, but shall use them only for the work to which they relate. This German tariff has been adopted by the architects of Belgium, Switzerland, and Italy, and has, I think, been printed at length in the London professional journals. The remuneration of architects in Sweden is regulated by a system similar to that adopted in Germany ; but, while the services to be rendered are similar to those there given, the rates of percentage are somewhat less.

The services to be rendered by an architect in Sweden, are :—*Esquisse*,—*Dessin net*, avec un devis approximatif. *Dessins et plans principaux*,—*Dessins complets*. *Devis et descriptions*,—*Calcul des frais*, avec indication des quantités et des prix, ainsi que désignation des matériaux, et du mode du travail. *Epures*,—*Tous les dessins de construction et d'ornementation*. *Surveillance*,—*Stipulation de contrats d'entreprise et surveillance de l'exécution*.

In France it has been decided by the Cour de Cassation as recently as 1875 that no law or regulation exists which fixes the fees due to an architect for private work ; that the Courts should, in the absence of any agreement, regulate them with reference to the work carried out and the services rendered. Public departments, such as the Ministère de l'Intérieur, des Travaux Publics, des Cultes, La Ville de Paris, &c., make special contracts, by which the architect, besides an annual salary ("*traitement fixe annuel*") is entitled to a commission ("*traitement proportionnel*") on the cost of the work ; and after their completion, he might be granted a further payment ("*gratification*"), not so much as a pecuniary advantage, but as an expression of satisfaction for work executed with economy and skill. Although the fees of architects have never been fixed by law, because the art is a liberal one, they are, when not otherwise agreed, generally determined by the custom of the place, or the scale fixed by the Conseil des Bâtiments Civils in 1800, and confirmed in 1841, by which the remuneration of archi-



fects employed by the Department was fixed at 5 per cent., the services to be rendered being defined thus :—"Confection des plans et des projets, la conduite des ouvrages, la vérification et le règlement des mémoires."

#### *The Five per Cent. Rate in France.*

The whole question of "honoraires" was very fully discussed at the Congrès International des Architectes, held in Paris in 1878, and under the auspices of the Société Centrale des Architectes, and I would refer those who are desirous of more detailed information than can be here given, to the report of the proceedings of that Congress published in 1881 by the Ministère de l'Agriculture et du Commerce.

The subject has occupied the attention of the Société Centrale des Architectes not less than that of this Institute. In 1849 a committee of that body reported that 5 per cent. must be taken as a mean applicable to most cases; had been generally recognised by courts of justice, but by arrangement, by reason of the importance or otherwise of the services rendered, might be deviated from.

The following extracts from some of the communications made to it sufficiently explain the spirit with which the question was considered at this Congress :—

"Whatever the merit of the architect who conceives and executes, whatever the nature of the work, whatever the skill, care, and time devoted to the studies and to the superintendence—always 5 per cent.

"The painter, the sculptor, obtain for their works their value; the physician, the counsel, charge their fees in accordance with their position and merits, and the care which they bestow.

"The counsel may have mistaken the case, and advised his client badly, but the latter pays the fees, and no more is said.

"The physician may have erred, his patient dies, and with him the doctor's mistake is buried; but nevertheless his fees are paid.

"The architect, however, receives always 5 per cent.; but if he makes a mistake, or is deceived, or if he has given way to concessions which may compromise his work, the critic is ready to seize with avidity on his faults, while justice is invoked against him with such rigour that even his future prospects may be affected, and that fortune and position, to attain which the architect is ever struggling, may be compromised.

"Pretended architects accept work on such terms that they cannot without loss perform the serious duties of the profession; but certainly if they thus lose, they profit in other and less legitimate ways.

"The client who thinks he has made a good bargain is not aware that the architect obtains from the contractors more than the difference he has saved, and to obtain it sacrifices his liberty of action, and hands himself over to them."

M. Davioud strongly urged the impossibility of framing an equitable tariff, the inapplicability of such a tariff system to an open and liberal profession, and the necessity of leaving each practitioner to assess his own value and to make his own bargain in accordance therewith and the nature of the work to be undertaken. In the result, after very long discussion, the Congress arrived at resolutions to the following effect :—The Congress, acknowledging the principle of freedom of labour and its unfettered remuneration, which is established on the principle of supply and demand, is of opinion that every architect should appraise his work at such value as he may think fit, which should be a fair remuneration for the skill displayed and the special difficulties overcome. Nevertheless, in the absence of any special agreement, it considers that the Avis du Conseil des Bâtiments Civils should be applied as a minimum until such scale has been modified in an equitable manner.

#### *Five per Cent. not a fixed Standard in England.*

Thus, the result of the Congress was that the inevitable 5 per cent. was considered to be a reasonable basis of remuneration. Here, in this room, the architects of the United Kingdom have, at great length, and for the last time twelve years ago, discussed the same subject and arrived at a similar conclusion; but having printed a document setting forth the opinions of this Institute and that Conference with reference to professional charges, it has been most unjustly imputed to the Institute that it partakes of the character of a trade union, an impression being somewhat general that adherence to the terms set forth in that document is an essential condition for membership of the Institute.

My own view of the position is this—that the document expresses the ordinary custom of the profession, by which, in the absence of any agreement to the contrary, the relations between architect and client should be governed; but the architect is left perfectly free to himself assess the value of his work. If the circumstances of the case and the nature of the work permit him honourably to accept a lower rate of remuneration he is perfectly at liberty to do so; while, on the other hand, if he considers that his position in the profession or the value or importance of the services rendered entitle him to make his charge at a higher rate, or as has been done by a late well-known and highly-respected

member of this Institute, without regard to percentage at all, he is perfectly at liberty to do so, and to secure the highest remuneration he can obtain.

#### *Foreign Practice as to Ownership of Drawings.*

The seventh question, "Are there any other important matters affecting the architect in his relations to his client or the contractor?" has not elicited any replies which need occupy your attention, but the ownership of the drawings is one which certainly merits the most careful consideration of the Conference, and may be considered under this head.

In France, Frémy Ligneville (vol. i. p. 229) declares the law to be that in the absence of any agreement to the contrary, the fees paid to the architect are considered to be due, not only for the construction of the building, but also for the preparation of the plans in accordance with which it has been erected. Thus the client can demand the delivery to him of these drawings, and the architect cannot claim any special fee for them; but the architect has the right to retain the plans and specifications he has prepared until his fees have been completely paid. The sixteenth article of the Institute document expresses the general custom that the drawings and specification remain the property of the architect, but recommends a distinct understanding with the client on this point. The German architects, in the remarks appended to the tariff before referred to, dispose of the question thus :—"All drawings remain the property of the architect. The client may demand copies of the design, but shall use them only for the work to which they relate." The third general head under which the questions were framed was that of "The Contractor," and in considering the replies and statements which I shall have to put before you, it must be borne in mind that the circumstances under which buildings are executed are so variable, and dependent upon so many conditions, that the information given must be accepted as only of general application, and not as representing invariable practice.

#### *Sub-Contractors on the Continent.*

The eighth question runs thus :—"Is it the custom to employ a general contractor to execute all the works required to be done in a building, or is the contractor employed for each trade, viz., a contractor for masonry, another for carpentry, another for iron-work," &c.

In Denmark both arrangements are usual. In Austria, in better class buildings, as a rule, separate tradesmen and contractors are usual for the several descriptions of work, as the master-mason or master-bricklayer, the stone-cutter, the master-carpenter, constructor of ironwork, plumber, &c. In Germany both modes of letting work are practised. Where the client engages an architect, he, as a rule, requires that the work of each trade be let separately. A great many architects, however, undertake the erection of buildings for a lump sum, especially in cases where the client wishes to be insured against extras, desires not to have to deal with so many parties, and prefers the sole and exclusive responsibility of the architect to that of a multitude of individuals. In England it occasionally occurs that the builder provides the design and drawings for the work he carries out; in fact, it is rumoured that builders who so proceed have said, "Oh, we keep an architect, and you need not go to the expense of employing one;" but the architect who contracts to carry out his own design is in these days, I think, quite unknown. If the practice does exist it would be most desirable that, if possible, full information should be given to the meeting respecting it. In France the general practice is to employ separate tradesmen, an independent bargain being made with each; but the general contractor is not entirely unknown. The ordinary practice appears to be that what was, I think, formerly universal in England, and is still retained in the North. Mr. R. P. Spiers has communicated to me a letter from M. Pascal, a distinguished Parisian architect, in which he says on this subject :—

"Notwithstanding the advantage which may be derived from having one general contractor, we prefer special tradesmen, who do their work better. The sole difficulty for the architect is to make them work in harmony with each other without reciprocally causing delays or prejudice to other works.

"The general contractor naturally takes a profit from each sub-contractor, hence augmentation of cost. He cannot be competent in all the specialties which he represents. Hence inferiority in the quality of the work: two causes which lead to the system of division of the trades being preferred even to the extent that a general contractor is only occasionally admitted for the works of the State."

There is a growing tendency in England towards employing special tradesmen for important sections of the work, but the great saving of trouble and annoyance arising from the employment of the general contractor renders it hardly likely that the good old system of master tradesmen contracting for each trade will be revived, and handicraft thus suffers.

#### *Foreign Tenders.*

9. "Is it usual for a tradesman or tradesmen to contract to do the building as shown by the drawings and specification for a fixed sum to be paid to him or them by the employer?"



The reply to this question received from Berlin is so important, that I should have been glad to have had the opportunity of making further inquiry respecting it, but time has not permitted this, and I will therefore quote the words of Herr Ende:—

“Cases in which the erection of a building according to the designs and estimates of an architect is let to a contractor who is not an architect are comparatively rare, particularly as regards elaborate and ornamental buildings, though it is done in the case of simple and ordinary ones, the reason being that, according to the idea prevailing here, an artistic building can never be completely finished from the first design and the first estimate, but the chief and best portion of the work must be designed and worked out during its construction. There is, however, an end to this when a contractor undertakes the building. Alterations can then be made only under stringent and costly conditions, which give occasion to all kinds of disputes.”

The ordinary French system appears to be *Marché au Rabais* or *Par série de prix*. Till recently *La Série de Prix de la Ville de Paris* was generally accepted as the basis, and each separate tradesman made his offer at a price to be calculated at a percentage above or below such schedule of prices. Recently the Société Centrales des Architectes has issued a *Série de Prix*, and the authorities of the departments and the great cities have also engaged themselves on the preparation of similar schedules suitable to each locality. The *Marché à Prix fait*, or *à Forfait*, is a contract for a lump sum, very similar to our ordinary contracts.

There is also another form of contract which removes the inconvenience attending that *par série de prix* of the client not knowing beforehand what the ultimate cost will be. This is known as the *Marché de Maximum*, and combines both the preceding systems, the bargain being that the work is to be paid for in accordance with the *série de prix*, but with the reservation that the total cost shall not exceed a fixed sum.

#### *Selection of Contractors Abroad.*

10. The Committee then ask, “Is it usual to select a contractor by means of tender received from several tradesmen stating the price at which they will do the work?”

In Austria the best method of selecting a contractor is thought to be by competition, either a limited one among trustworthy firms, in which case the contract must be given to the lowest tenderer, or an open one, in which case the contract is not necessarily given to the lowest tenderer, but to the most reliable one at the lowest possible prices.

#### *Foreign System of Measuring.*

11, 12, and 13. “Does a contractor make up his tender by means of measurements or quantities taken from the drawings and specification? Are these measurements prepared by the contractor or contractors for his or their own use, or by some other person for his use? Who pays that person?”

I feel much hesitation in dealing with these questions, as they can only be satisfactorily answered as the result of closer inquiry than it has been possible to make. In Denmark the contractor makes his measurements for his own use. They have no surveyors to take out quantities, and nothing is paid for them. In Austria the amount due to the contractor is ascertained by measurement from the drawings of the work actually performed, and it is only as an exception that the measurements are taken from the work itself. The measurement and taking out of quantities are performed by the architect from the plans, but the contractor has to make out a measurement for the account. In Germany estimates of quantities are prepared by the architect, or at least under his instructions by his permanently-employed assistants. There are some few persons who occupy themselves exclusively in the preparation of estimates; but the architect has in all cases to check their work and be responsible for it. The system of *verificateurs* which obtains in Paris is quite unknown. In France the architect should provide besides the *devis descriptif*, or specification, the *devis estimatif*, or particulars of quantities, which documents, together with the general conditions, constitute the *cahier des charges*. When a contractor tenders he employs a *mètreur* to take out quantities. This *mètreur* is often a clerk in the contractor's office, and is paid by him. The *mémoires* and bills are checked by the architect or the *verificateur* paid by him. In Germany the architect is responsible for the estimate of quantities, but he endeavours to diminish his responsibility by submitting the calculations to the contractor for the purpose of being checked and conforming to his criticisms; that is, adopting the same reckoning. The responsibility of the contractor to the employer for losses caused by bad work and materials is in France and in Germany limited, unless otherwise stipulated, to a period of ten years, and I commend to the student of this subject the treatise of M. Masselin to which I have before referred.

Generally each of the correspondents appears satisfied that the system in use in his own country works fairly well, Professor Fenger making the necessary reservations:—1. That only competent persons are employed as architects and contractors. 2. That the necessary time is granted for preparing plans, specifications, and tenders, and for erecting the building. Generally

reviewing the information which has been collected, it appears that the profession in England occupies a position in many respects more advantageous than in other countries, and, although the discussion will, I hope, advance towards a solution of some of the doubtful questions still capable of being mooted, there is, I think, but little which could with advantage be adopted from foreign practice into our own.

#### *Disputes in Contracts.*

There are two subjects of some interest which were not touched upon in the questions prepared by the Committee, or alluded to by their correspondents, with regard to which I beg leave to occupy your attention for a few minutes. These are known in France as *Expertise* and *Privilege*.

*Expertise* relates to the course taken in litigation to inform the court upon technical facts, the endeavour to ascertain which is under our law generally made by the oral evidence of witnesses, who, from the very character of their retainer on behalf of plaintiff or defendant, often fail to dissociate from themselves the imputation of advocacy, and the nature of whose testimony has given rise to an observation attributed to a late eminent judge, that “professional witnesses not unfrequently become witnesses by profession.” It is clear that in litigation in which technical matters are involved the court must obtain information from persons acquainted with the art or trade in question. The court has to apply the law on the basis of facts of which it can only have cognisance when they are proved before it either orally or in writing.

The experts are generally three in number, are appointed by the court, and report to it. The parties may object to the nomination of an expert on certain defined grounds, such as relationship or connection with one of the parties; having been in any way concerned in the proceedings; having expressed an opinion on the matter in dispute; or being known to be hostile to one of the parties. They are sworn to honestly fulfil their duties, and, when once sworn in, it is compulsory on them to proceed and make the report. They are not arbitrators, who are really judges and decide the case; they merely ascertain the facts and report their professional opinions. They hold an inquiry on the spot, the parties being summoned to attend, and having the right to be present and to assist at the inquiry; in fact, at all that forms a material part of the *expertise*, except the preparation of the report, which is, of course, carried out by the experts in private.

The report consists of two parts:—*a.* The *procès verbal*—statement of proceedings, and of the facts as ascertained. *b.* The *avis*—the opinion or recommendation at which the experts have arrived as the result of their consideration of the facts.

When the three differ in opinion, and are not of accord in making one report, such opinions and the grounds of difference must be stated without indicating which is the personal opinion of each. The court is not bound to follow the recommendation of the experts, but consults it for information, and makes such use of it as it thinks fit. It is, therefore, desirable that the reasons for the recommendation should be given, but that the mind of the court should not be prejudiced, as it might be by the names of the experts being attached to each opinion. Occasionally in English practice, in the Common Law divisions, and more frequently in the Chancery Division, the courts have desired to be informed of facts by independent experts instructed by the court; but, so far as I am able to form an opinion from cases I have read, the French system I have slightly sketched appears better adapted to ascertain the truth and correctly inform the mind of the court, than our system of “teams” of witnesses, who are often cross-examined by counsel whose deficiency of technical knowledge places them at a disadvantage, while the contradictory testimony of the witnesses confuses the court, and obstructs the administration of justice.

#### *Payment of Foreign Architects and Contractors.*

The *privilege* of architects and contractors over the works of construction they have carried out to secure them payment for their work, gives them the right of being paid out of the proceeds of the sale of the property in preference to the creditors of the owner, even as mortgagees. A similar privilege was accorded in Roman cities by Marcus Aurelius, but applied only to the rebuilding of destroyed premises, in order to give architects and builders an encouragement which would facilitate the embellishment of the cities by the prompt restoration of ruinous buildings. “Ne urbs ruinis deformaretur.” But, tempting as the prospect of thus securing payment may be, stringent formalities must be complied with before the *privilege* can be obtained.

Thus, before the commencement of the work, an expert named by the Tribunal of First Instance of the district in which the works are situated prepares a *procès verbal*, describing the condition of the property at the time, the object being (1) to preserve the value of the property as it exists before the works, for the benefit of the creditors who may already have a charge upon it; (2) to afford a basis for ascertaining after the completion of the works the augmentation of value of the property resulting from such works, and it is only over this augmentation that the *privilege* can be exercised.



Within six months from the completion of the works they must have been accepted by an expert similarly appointed. He may be the same as acted at the commencement, but must be newly appointed. He prepares a *procès verbal* descriptive of the works and of their cost. These two documents must be registered at the Bureau des Hypothèques of the district, and it is only then that the *privilege* can be obtained.

Frequently, to avoid these formalities, architects and contractors are content with a charge on the property, either by the terms of the contract or by a separate deed; but this security is far inferior to that obtained in the more formal manner.

There are other subjects upon which I might enter, but I must bear in mind that I am not professing to read an exhaustive paper, but am simply bringing before you such notes as may serve to introduce a discussion on topics of interest to the profession, and that the most valuable portion of this evening will be that which affords the members of the Conference the opportunity of expressing their opinions and raising discussion upon some of the important professional questions to which I have alluded.

Permit me, in conclusion, to say that the cordial thanks of this Conference are due, and will, I hope, be warmly accorded, to those corresponding members of the Institute who have so kindly and so carefully answered the inquiries addressed to them by the Committee.

#### Discussion.

THE CHAIRMAN, in inviting a discussion of the paper, said that it was evident that they owed a great debt of gratitude to Mr. Cates for the great labour and research that that gentleman, busy man as he was, must have given to the subject, and had thus been enabled to put before them a mass of dry statistics in such form as would enable them to draw their conclusions from them. In the various data brought from the different countries abroad each correspondent had notified that architects were as a rule perfectly satisfied that the system under which they work was the very best one. He should not wonder if they themselves came to the same conclusion with regard to their own system, and that they had little to learn, though much to interest them in these details of foreign practice.

Mr. CATES, in replying to a question, said that as far as he understood the communications he had received, it appeared that the payment for the preparation of estimates was covered by the commission. The architect certainly had to pay the *verificateur*. There was no special remuneration received by the architect for taking out quantities. In Germany it was generally understood the architect should not receive anything whatever from the contractor.

Mr. TAVERNOR PERRY referred to a large work he was engaged on in Germany jointly with another architect, Herr Lang, of Berlin. They shared between them 6½ per cent., doing all the drawings, quantities, &c.

Monsieur LEUCHARS addressed the meeting, confining his remarks chiefly to points concerning the remuneration and responsibility of French architects.

Mr. E. C. ROBINS, F.S.A., alluded to a difficulty in the question of ownership of plans—viz., that the architect's drawings, when they passed out of his hands and ceased to be his own property, were liable to be used improperly. In his own experience no use had been made of them except in case of something going wrong with the drainage, &c., when they merely wanted the guidance of the plans to enable them to remedy what was wrong. His practice was always to furnish his client with drawings showing the drainage, &c., and he had never been asked for more. He would ask whether in the provinces clients asked for plans, and if so, what plans were asked for, and if they suffered any invasion of their rights in giving up their plans?

Mr. BRUTON, Oxford, said that some years ago he designed a building for a limited liability company, who demanded afterwards to have the drawings, to which he had answered that he considered the drawings were his property. To this they replied that if he declined to give up the drawings he must furnish them with the name of his solicitor. Consequently he had submitted, and sent them the drawings.

Mr. J. B. FRASER, of Leeds, said that in the course of his long practice he had never been asked for anything beyond the drawings which showed the drainage arrangements. He had a word to say also on another point, viz., the taking out of quantities. In the provinces their experience, as a rule, was entirely in the direction of the quantities being taken out in the architect's office. Moreover, the employment of a surveyor would probably be the cause of considerable mischief. A charge was, Mr. Fraser said, always made for the quantities, and with regard to responsibility for them, the work was measured on completion.

The CHAIRMAN: Thus the architect takes the responsibility.

Mr. FRASER: To a certain extent it is so. If a mistake occurs, and a deficiency results, he knows well how to make it up.

Mr. L. C. RIDDETT said that in his experience, when the London School Board employed outside architects, it required them to deposit the original drawings with the Board. An old friend of his made a set of tracings, gave them to the Board, and retained his drawings, and he heard no more of the matter. As to quantities, they in London could not be familiar with country practice, but they got some sort of insight into the sort of quanti-

ties which came from masters of all trades, and they did not find they got from these gentlemen good architecture or good quantities. If they could imagine an architect sitting down seven hours a day to take out his quantities, they might also believe in his doing his work, the work of an architect, with the skill attributed to such architects as Sir Gilbert Scott, &c. For his own part he had firmly resolved never to act as judge in any case, and never to act as surveyor in his own case. The two functions were utterly incompatible. The practice also encouraged a bad tendency of the day, conducive more and more towards hurry and slovenliness. Would builders accept the architects' quantities as accurate? The London builders looked principally at the name which was on the bill of quantities, and were inclined to look on an architect as a man who had to serve two masters. Architects in the provinces laboured under great difficulties. They could not send their drawings to a London surveyor. The employment of a country surveyor would mean mischief in the way of gossip. Everything, however, seemed to point to this, that quantities, when taken out by the architect, should become part of the contract. A body of men—measurers, as they had in Scotland—were needed in England, with the power of an appeal, both on the part of the builder and the client. This left the architect his 5 per cent. without responsibility for the quantities, and the builder understanding he could appeal from the architect, justice would be done, and matters go right.

Mr. JOHN HONEYMAN said he considered they had in the North the best system altogether. Having a competent architect, a competent surveyor, and time to do the work, nothing could be better. It never happened that an architect in Glasgow took out his own quantities, as they had excellent measurers to do that work. But it did not follow that they did not understand quantity taking. It would be utterly absurd if they did not, for again and again they had to check the measurers in mistakes which would be detrimental to their clients. Thus their quantities were taken out by men who were used to the work. The architect undertook to give the measurer all information required, plans, details, &c., so that there was nothing left to his imagination. The system they found worked remarkably well. A point in which their practice corresponded with that of Austria and Denmark was the selection of separate tradesmen for each part of the work. This general practice had, however, been of late somewhat departed from. It entailed extra labour on the architect, but it was open to question whether he should shirk that little extra trouble, considering the increased excellence of the work. As to the ownership of drawings, he did not ever remember being asked for any drawings beyond those for drainage, &c. There was a growing demand on the part of public bodies for having complete copies of the drawings of the town buildings. It was useless to attempt to keep drawings from a client if they were obliged to give a complete set to every little local authority. Two Bills were now before Parliament containing provisions which the Legislature should think twice about passing. One concerned the sanitary inspection of buildings. The other provided that plans of all buildings should be lodged with the local authorities, and also that any one, on paying a small fee, could obtain a copy of these plans. It was quite worth their while to consider what ought to be done in this matter.

In answer to a question, Mr. HONEYMAN replied, as to responsibility, that they were the contract to all intents and purposes; and there was no responsibility with the original quantities, the work being measured at the end.

Mr. BOARDMAN, of Norwich, said that in his experience they only gave to clients drawings of drains, water-pipes, &c. The chairman of the governors of the Norwich and Norfolk Hospital (a building costing about 50,000*l.*) asked him what he would charge for supplying a set of plans of the hospital.

Mr. BATEMAN, of Birmingham, said that they would be glad in the provinces if some uniform action could be taken on the vexed subject of quantities. Practice in this matter had been for so many years divergent that he had little hopes of a change. The practice in London was nearly universal to employ a surveyor, and local practice was for the architect to be his own surveyor. He failed to see that any error in the quantities on which the contract was based should not be subject to revision when the work was finished—for this reason, because he had known high-minded surveyors put their hands in their pockets to reimburse the builders for works omitted in the contract, thereby saving the client's pocket. Whether the architect or a surveyor should take out the quantities seemed to be a matter turning on convenience in their local practice. In his own practice of between thirty and forty years he had always taken them out for works of moderate dimension; where it came to works costing 30,000*l.* or 40,000*l.* it would be impossible for the architect to give the time to it. The Institute had hitherto taken up firm ground on the question, and there was a feeling that architects who took out their quantities were in consequence under some kind of professional ban, and were thus placed at a disadvantage. He did not know that this was actually the fact. In his own mind, however, he had no doubt that, whether taken out by the surveyor or the architect, they should form in all cases the basis of the contract, and this for reasons before adduced. In the early days of his practice he had



known errors of considerable magnitude to occur. As to drawings, he had been asked for a set and had charged thirty guineas for a copy of them.

Mr. PRATT asked whether it was the custom among architects generally to ask builders at the end of a job to deliver up all the drawings supplied to them during the work? It seemed to him only right and proper, and in the event of the client asking for drawings, these could be given to him.

Mr. HOWARD COLLS, speaking from the point of view of a contractor, said that the position of the builder was a simple one. If an architect took out his own quantities they should, without reservation, form the basis of the contract. Architects' quantities, however, generally caused trouble; they were something like quantity-surveyors' architecture, not of a high character. Builders would never complain of architects taking them out if they were made *bona fide* part and parcel of the contract. They did not like it all the same, and thought it should be entrusted to some one who would act between the two. An architect would be more or less on the side of his client. (No, no.) They ought not to be, but it was only human nature, and, therefore, more than ever necessary a middle man between the architect and builder. The form of contract was important. A form had been arranged between the Institute and the Association of Master Builders, which was perfectly fair and straightforward, arrived at after an immense amount of labour. He was sorry to say that many architects here tried to shirk its use, and make builders sign one of their own. A shipowner would laugh at being asked to sign any other agreement than that of the charterers. Of course builders ought not to laugh at architects, but if they did it could hardly be considered derogatory to the profession itself. There had been much controversy about this, and it was difficult to speak calmly on the subject, for builders felt themselves hardly treated.

Mr. STANLEY BIRD, President of the Master Builders' Association, on being requested to speak, said he would add a word in confirmation of what Mr Colls had said about forms of contract, a subject which the builders and contractors of the United Kingdom took much to heart. He spoke more especially of provincial builders, who had long groaned under great injustice in having such contracts forced on them without being able to resist. Only since the formation of the Builders' Association had they been able to get introduced the new form of contract. They owed a debt of gratitude to the Institute for framing it. He must say it was not quite perfect, and that it needed some little alteration, as it did not sufficiently set forth that the quantities should form part of the contract. It had been said that it was difficult to find work enough in the country for a surveyor, but if country architects took out their own quantities, that was no reason why they should not form part of the contract. On the present occasion he believed it was the custom for the Institute to elect a fresh council. When elected he hoped they would consent to receive a deputation with regard to this subject, which interested builders and contractors so nearly. The question of arbitration also required settlement, and it was a subject on which they ought to have the opinion of the Institute.

Mr. LINCOLN said he thought little more would be heard about the question of quantities if they were paid for by the client. He then instanced a case of the running up of charges by a surveyor.

Mr. T. M. RICKMAN observed that if architects could tell stories about surveyors, that surveyors could also tell them against architects if they pleased.

Mr. WYATT PAPWORTH remarked on the different terms of the liability of contractors in different countries, viz., twenty years, ten years, and in England not more than seven years. Contractors here could evade the responsibility by becoming bankrupt. Did the same thing occur abroad?

Mr. T. BLASHILL said he thought that the system in regard of quantities would continue to be followed in London as heretofore. It was advantageous to a client to know as nearly as possible the amount of money he would be called on to spend beforehand. Many had only a certain amount to spend. Thoughtless people often looked on a client as a man with unlimited command of money, but it was a serious thing to have to go and tell a client that, owing to a mistake, there was 500*l.* to pay; and this was one reason alone why architects should not take out their own quantities. This safeguard was lost if quantities were made part of the contract, and the necessity for the existence of surveyors would be to a great extent done away with.

Mr. ALDRIDGE, of Liverpool, said that if they sat all night discussing the matter there would not be unanimity of feeling between London and country architects. Quantities had been forced on provincial men by circumstances rather than taken up by them as a matter of pleasure. There were no country surveyors, or at any rate very few, and in small towns it was not desirable to send out their drawings to a surveyor. He had not a word to say against London surveyors. The client was not the surveyor's but the architect's client, and the surveyor had not the same interest in going into the minutiae of the work and keeping the cost down as the architect had, who, going piecemeal into the work and dissecting it thoroughly, was able to keep the cost down and often save the client a considerable amount of money. The speaker then

hinted that he could give cases of how the cost had been considerably swollen by London surveyors having taken out the quantities. The very circumstance of an architect taking out his quantities tended to more completeness in his drawings.

The CHAIRMAN remarked that human nature was finite, and that the matters for argument of Mr. Cates's paper were, as he had before pointed out, infinite, and the discussion had drifted about and taken up all the time at their disposal. The desire of the architects in this country was to make an absolute friend of a client, not one to be operated on and bled for a season; but they endeavoured to consult his wishes and sympathies as far as possible, and, as happened in many cases, make him a friend for life. That was the position they, as architects, desired to have, and they would rather forego all the protection of the Codes Civil and Napoléon if they could obtain that position. A shifting scale of remuneration seemed to him undesirable, and likely to lead to every conceivable kind of dispute, and therefore our own rough and ready, but generally fair rate of 5 per cent. seemed best, and the French appeared to have come to the same conclusion in spite of the tariff and Code Napoléon. In the matter of quantities, architects had too much business as it was. It could not be helped, but they should do their best to the client to avoid it, to debase the business and exalt the art. Three gentlemen in a back room were just as likely to mislead the Courts of law as the counter-statements of experts in the Court itself. The remarks of the judge were often misplaced, and it was not right in judges to complain of having to do their duty.

A cordial vote of thanks was then passed to Mr. Cates for his paper.

Mr. CATES acknowledged the vote, and, replying on the discussion, explained that the responsibility for the wide range of subjects included in his paper rested with the Council and not with him. Feeling that the question of quantities had been exhaustively discussed in the past he had endeavoured to exclude it as much as possible, but, notwithstanding this, that question had engrossed the chief attention that evening. One point of very great importance had been raised by Mr. Bateman and others. Some prominent architects appeared to think that those who took out their quantities were looked upon by their London professional brethren with less favour than those who did not. He could assure them that such was not the case, and, in some instances, such architects stood higher in estimation than others as practical men. The whole question turned on whether the quantities should be made part of the contract. So soon as this was done, the rate of commission would be reduced to a mere clerk's pay.

#### WEDNESDAY, MAY 7.

The third meeting of the Conference was held on Wednesday, at Conduit Street, when Mr. Edward P'Anson presided. The following paper was read:—

#### The Tenure of Land for Building Purposes.

By THOMAS BLASHILL, F.R.I.B.A.

The tenure of the land upon which buildings are erected is a matter of the greatest public importance, and one which, from various causes, is now receiving an unusual amount of attention. So far as it affects the condition of buildings, their capacity for improvement, and their influence upon owners, occupiers, and neighbours, it is a question belonging peculiarly to our own experience. We should therefore be able to deal with it practically, and unbiassed by considerations of class or party.

With the view of assisting us in the discussion of this subject, inquiries have been made of our foreign correspondents as to the customary tenure of building land in the chief European countries. We find that in France, Germany, Austria, Denmark, and other countries, buildings are erected only upon land which we should call freehold, so that there is no such question as that which is now before us, and we can learn nothing from their experience of different tenures. If our country resembled any of these in its capacity for business, and in the prosperity of its population, their example would be of great value, but in existing circumstances we shall probably do well to study the subject from our own point of view.

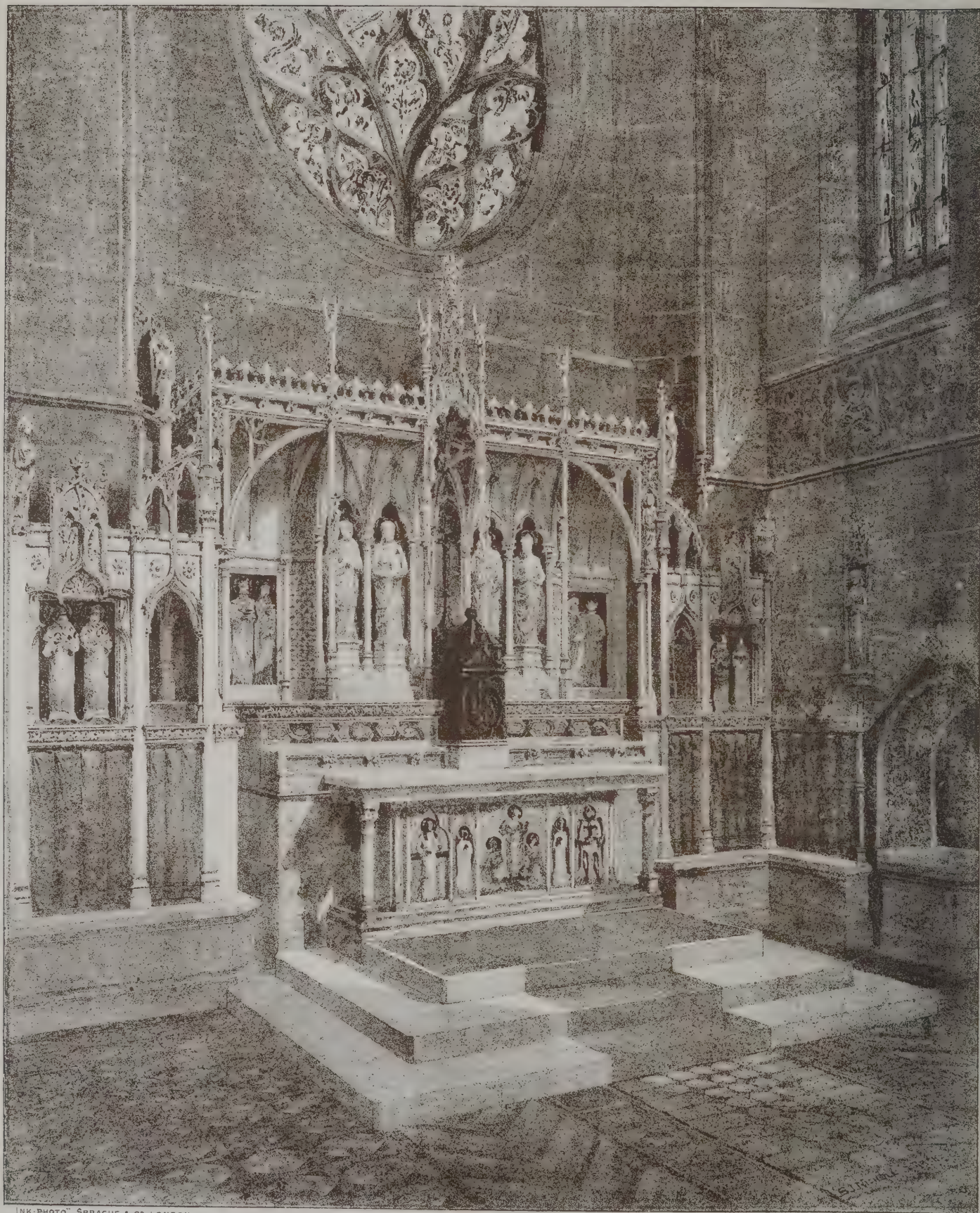
We shall, no doubt, agree that, in principle, it is best for a man to be able to build upon his own freehold land. He ought to be the best judge of his requirements and of his means. If he builds on speculation, or for investment, he ought to know best the wants of his customers, or tenants, and the price at which they will buy or hire. It is most to his interest to keep the premises in good repair, to alter them judiciously, to enlarge or rebuild as circumstances require. If his judgment is good, the gain is his; if bad, the loss is his. But if, through the tenure of his land, he has to submit his judgment to some other person, he is very likely to be fettered in his action, and may have to pay heavily for liberty to do what he considers best. This freehold tenure is what each would think best for himself. It is also best for other people if we add the restrictions that are required in the public interest, and those which may be desirable between neighbours for their mutual advantage.







The Architect, May 10<sup>th</sup> 1884.



INK-PHOTO, SPRAGUE & CO. LONDON

ALTAR, ST CATHERINE'S, WEST DRAYTON.

S. J. NICHOLL, ARCHITECT.







Die Architektur, May 10<sup>th</sup> 1884.







## GLADSTONE BUILDINGS, SHEFFIELD.

MESSRS HEMSOLL & SMITH, ARCHITECTS.











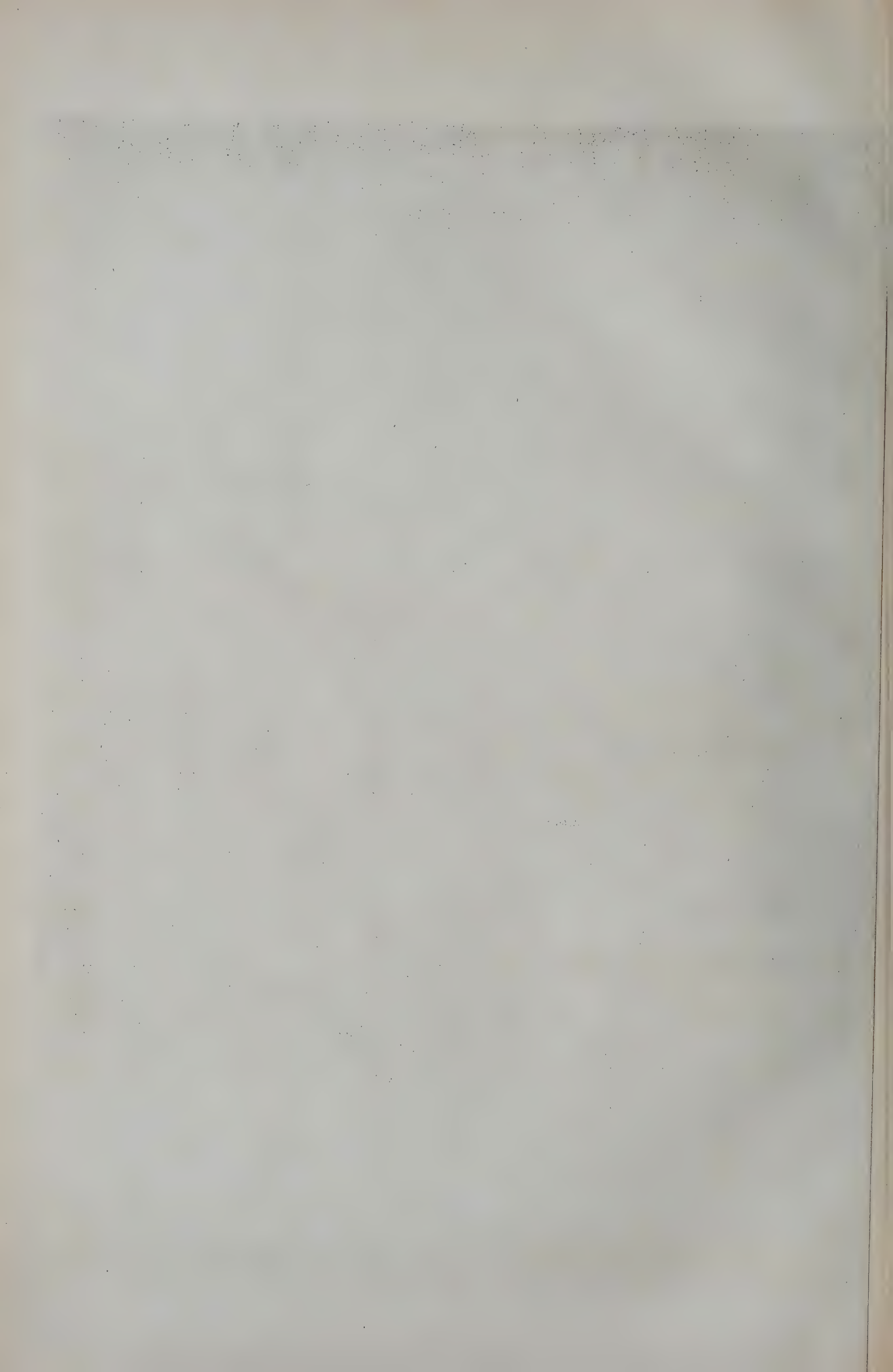






AN OLD MANOR HOUSE.









HOUSE, BARKING ROAD, CANNING TOWN, E.

WILLIAM G. B. LEWIS, ARCHITECT







The tendency of modern legislation has been to promote the conversion of other ancient tenures into freeholds; and to make the freeholder, though he may be only a tenant for life, more free in the use of his land. If the land is in London or any of our larger towns, the use which he makes of this freedom is to dispose of it on building lease, so that the property, which before might be tied up only for the present generation, becomes tied for the duration of about three generations to come. Our subject may, therefore, be limited to the forms of leasehold tenure on which land is now let for building purposes, and specially to the system of terminable leases, which has for a considerable time prevailed in London, and is being extended to our largest provincial towns. And it will be useful to bear in mind the convenience of freehold tenure in judging of other modes of holding building land.

#### *Building on Leaseholds.*

Now the system by which a person intending to build hires a piece of land instead of buying it, and covers it with buildings which his representatives must at the end of ninety-nine, or ninety, or eighty, or perhaps only sixty years, give up in tolerable repair to the ground landlord, is one which is peculiarly liable to be misunderstood by those who are unacquainted with such business. As a subject for a telling speech or a smart article, we are familiar with the picture of rows of houses run up to last only so many years as the lease will endure. They are supposed to fall in pieces about that time, after having been during their later years the disreputable means by which the middle man has satisfied his "greed" at the expense of the unfortunate tenants. At the end of the lease the holder is a poor widow who is solely dependent upon the property, and finds it "confiscated without any compensation" by the ground landlord, who, moreover, endeavours to make her restore it to a habitable condition.

It is hardly necessary to point out that these pictures give no true idea either of the nature of the transaction or of its practical results. The deliberate building of a house to last for about the term of the lease is a popular fallacy. The buildings with which it is connected are the work of the worst class of speculating builders, who have no interest in or care for the length of the lease. They build to sell, and they hope that their own interest will cease as soon as their buildings are finished. Under such conditions they would build as badly on their own freehold ground, or worse, for they would in that case be free from the supervision of a ground landlord. Houses of this class seldom last for half the usual term of a building lease without serious dilapidations. I have had to procure their demolition before they were finished, and have known them to become uninhabitable before they were occupied. Some of the worst of these buildings have been built on the speculator's own freehold ground. When houses are manufactured in large numbers for sale, it is highly improbable that the buyer can exercise any useful supervision over their erection, and nothing but building regulations of a stringent character can prevent this kind of work, or give a chance for the respectable speculator to compete with those who have no desire to build substantially—perhaps no knowledge of the ordinary principles of sound building. The regulations in our Metropolitan Building Acts are more lax than those of many provincial towns, and far behind those of the large Continental cities. They may, nevertheless, be quite equal to the demands of the public, for a very large proportion of our population do not practically call for well-built houses by showing a readiness to pay for them.

But the man who builds for his own occupation or investment, and intends to keep the property in his family, will hardly have the folly to build in an unsubstantial manner, for any serious defects in construction will show themselves within the term of a building lease, and the penalty would fall upon him or his near descendants. A man of ordinary prudence, having built substantially on his leasehold ground, will, if he cares more for his posterity than he does for himself, lay by a sum which will probably be only a few shillings per annum to form a fund that shall, at the end of the term, be equal to the original cost of the building. If (as may be very reasonable) he cares more for himself than for his remote and problematical descendants whom he will never see, he will allow the matter to take its course. At every change of ownership, whether by inheritance or by purchase, and at any time during the continuance of the lease, the temporary leaseholder will know how long the property will remain to him, and how far that influences its value. If he has the ordinary good fortune of the London leaseholders of past times, he will be in receipt during the latter half of the term of an income from the property very considerably in excess of that calculated upon by the original lessee, while he will still be paying only the original ground-rent of one-half or one-fifth of the increased value of the building plot.

Meanwhile the ground-landlord has been unable to share in this prosperity. If the property be in central London, he may still be receiving the ground-rent fixed early in this century, when men of business lived over their shops and offices in streets lighted by oil-lamps, before railways, free trade, telegraphs, cheap postage, cheap newspapers, and all the aids to commerce which have marked the last two generations were in the least foreseen. The ground-landlord in one of the suburbs may still be limited to the rent fixed when that suburb was an outlying village, without

trade, without cheap communication, and separated from the great centres of business and of pleasure by roads infested with footpads by night, and, according to modern notions, hardly passable by day. The improved rentals, which he may never live to enjoy, are probably shared by middlemen, representatives in different degrees of the interest of the original lessee.

In discussions of our leasehold system these considerations are generally overlooked. In a paper in the *Fortnightly Review* for March, by Mr. Broadhurst, M.P., who has taken a great interest in this subject, and whose Bill for enabling leaseholders to purchase the fee simple was lately before Parliament, there is this story, which the writer evidently thought to be a strong support to his case:—

"A person had bought the remainder of a lease on a West End estate, and towards the end of the term he sought a renewal. The terms offered were as follow:—1. That the original ground-rent should be increased from 10*l.* to 50*l.* per annum. 2. That a fine of 1,400*l.* should be paid for the privilege of renewal. 3. That 500*l.* should be expended in repairs by the lessee."

Now, it will strike men of business that the thing which would have shown whether this was fair to the lessee or hard upon him, viz., the actual present value of the premises (which he had, no doubt, bought prudently, but which he seems to have neglected), is omitted from these particulars. The same fault usually marks such stories as these, by which a lessee who desires to have a benefit that does not belong to him practises on the good nature of a sympathetic member of Parliament.

#### *Terminable Leases.*

Every loss which a lessee may sustain can be estimated in pounds and stated in figures. We shall probably be of opinion that the losses said to be incurred by the holders of terminable leases (which have been managed with ordinary prudence) will not bear that test; but it does not therefore follow that terminable building leases are desirable as a system and to the extent to which they are now being adopted. When the original parties to the lease have passed away the property has to be managed for some two generations under the covenants made by these dead people, and with strict reference to the supposed interests of a reversioner who may not yet be born. The character of the neighbourhood, the circumstances of the property, may be entirely changed, and the only person who can adapt the premises to the new conditions is the then holder of the lease, who, besides, may have his own means of increasing the value of the premises to himself without any real injury to the ground landlord. He may even desire to rebuild or greatly improve the premises for the benefit of both parties. In any case he must apply for the consent of another person, who may exact an enormous consideration for it, or may, from ill nature, refuse point blank. If he is not really in bad hands, he may find that through the nervousness of trustees, or the caution of professional advisers, he is so hampered in his arrangements that his scheme has to be abandoned. If his lease is about half run out, the cost of extensive additions will fall so heavily on the short remainder of it that he may then be tempted to build in a flimsy manner. When the lease draws still nearer to its end, it is decidedly against his interest to keep the premises in proper repair, and the Legislature, in passing the Conveyancing Act of 1882, has taken such care of the interest of such persons that it will now be exceedingly difficult for the ground-landlord to compel the performance of repairing covenants. Hence arises much of the present outcry against leasehold property, though it will be found that much of it is really due to the indifference of freeholders, who are, perhaps, only tenants for life. These results of the system of terminable leases are a matter of public concern; for it is to the public injury that large areas of the metropolis should be checked in the ordinary progress of improvement for the term of two generations. It is a matter well worthy the careful consideration of those most intimately concerned with the working of the system—the ground-landlords and their professional advisers. In my own experience I have found that in dealing with the larger corporate bodies, and with the ground-landlords of large private estates, the tenant has usually been treated not merely with fairness, but with the liberality which one likes to see accompanying the sentiment of ownership. I have also known the owners of a small estate make a great sacrifice to relieve an unfortunate tenant. But there are some large public bodies who are said to be not so well advised that they can safely be trusted to act liberally, and small people cannot be trusted to any great extent.

#### *Compulsory Purchase of Leaseholds.*

I do not, however, think that we shall approve recent schemes for the compulsory purchase of leaseholds. Such schemes would enable a lessee who desired to improve the property to become the owner of it, and so far that would be to the public advantage. But it would open the door to a class of schemers who would use the enfranchised leaseholds as a means of injuring estates on which none of the evils now complained of really exist. It would be a strange mode of rewarding the owner of neglected leasehold property if we enabled him to buy at the price which a willing



purchaser might give for the rookeries which are the result of his neglect.

Before we consider improved forms of tenure it may be interesting to give the view of the only permissible form according to the ideas prevalent in Spain. Senor Belmas, writing from Madrid to Mr. Phené Spiers, says, "Every one who wishes to build begins by purchasing his ground, and, without being the absolute proprietor, no one would think of building even the least thing. On the contrary, if by chance what is done in England were known it would astound every one." Are we in London prepared to return to that primitive system? or to pass any Act of Parliament that would practically enforce it? There is a Royal Commission now sitting which will doubtless tell us how it is that in England—the most prosperous country on this side the ocean—men will not, as a rule, even when they might, acquire the freehold of the houses in which they live; why, when they happen to be the proprietors of their cottages, they sell them on the first opportunity; why the Englishman devotes a smaller proportion of his income to house-rent than any other man; why house-rent in London is cheaper (like for like) than in any important Continental city; and how it happens that the average London householder does not live more than three years in the same house. If it is argued that any of these things are due to our system of terminable leases, they will find that they exist, and have long existed, so far as a comparison can be drawn, quite independently of them. If it is argued that the slums of our great cities are due to the leasehold tenure, we may ask how it happens that evils quite as great have arisen in the great American cities, from New York to Chicago, where no such leases exist; and why the slums of Paris, though less extensive than our own, show, if possible, more shocking phenomena.

For our own part, we have to deal with things as they exist. In a state of society in which it is more convenient to build upon leasehold land than to buy the freehold, we must consider how much of the convenience which belongs to freehold can be grafted upon the leasehold tenure, especially in the point which most affects the public interest, which is to secure to persons having control and substantial interest in buildings reasonable liberty and encouragement to improve the property.

#### *Provincial and Northern Customs.*

There are, in various parts of England, customs of holding land subject to chief rents or fee-farm rents, about which I hope we may hear something from those who have practical experience of their working. The effect of such terms is to create what we might call leases in perpetuity, if such things were legally possible, and the best example of this on an extensive scale is found in Scotland, where building land is commonly let on what is called a "Feu charter." By this system the tenant is bound to keep a building upon the land of twice the annual value of the amount of the rent. The rent does not increase, but it is easily collected, and forms in Scotland the best available kind of investment. We may hope to hear from some of our Northern friends the advantages and the disadvantages of their system; but it appears that if this tenure were known here, and the habit grew up of investing in such securities, the objections to building leases would disappear. It appears also that the ground-rents under such a tenure would rise very considerably beyond the rates that are now paid. The increased rent should not only remunerate the ground landlord for the loss of the reversion to the site at the end of a terminable lease, but it would include some share of possibilities of improvement which are prevented by the present system, to the loss of both lessor and lessee.

There are certain classes of ground-landlords, such as corporate bodies, charitable trusts, and some heads of families who might not be tempted by these increased rentals. But the ordinary owner of land for investment may well consider the advantage of such a system of letting building land. I feel sure that its adoption would lead to the application of the same system in many cases where a lease has so many years to run that the present owner of the freehold cannot expect to enjoy the reversion. In such cases it would be easy to ascertain the value of that reversion, and to fix an increased ground-rent which would give the present owner the full income which his land may now be worth. Probably such leases would be made renewable periodically at a fixed nominal fine; but the precise shape which the legal business would take is a matter for lawyers rather than for surveyors.

I understand that in Aberdeen a system has grown up of letting building land for a term of sixty years, the ground-rent to be doubled after a lapse of the first twenty-five years, for some reason which I fail to see. If we admit the principle of an increasing ground-rent, it would seem more fair to provide for a revaluation of the ground, say three or four times in a century, and at such times renewing the lease at the new rent. This would make the leaseholder in the same position as the holder of freehold land, except that he must allow the ground-landlord to share in the increase (and possibly in some cases the decrease) of the value of the property.

There is in the West of England a very important question arising out of the local custom of building upon leases for lives. Whatever the advantage of such a tenure may have been in past times, its uncertainty conveys to us the idea of a gambling trans-

action, such as must be highly prejudicial to business. It is, of course, possible to insure the lives, and every careful lessee would do so; but the cost of such insurance, and some share in all the other inconveniences of such an uncertain tenure, must fall on the ground-landlord, and it seems surprising that such a custom has not been abandoned in the interest of both parties.

In bringing this subject before the Conference, I have endeavoured to touch upon the questions which are of the greatest importance; but I do not suppose that I have included everything that is worthy of consideration. We can have (as I have hinted) no political views; we are, therefore, the more able to place the whole matter in its true light, so that defects in existing customs may be remedied by those who are practically engaged in the management of these transactions. Possibly, also, those who desire to deal with questions involved in the ownership of land devoted to building purposes may learn something in the course of this discussion that will help them to clear and just views of a subject which at present does not seem to be very well understood.

#### *Discussion.*

Mr. JOHN HONEYMAN said he believed there was a great deal of misapprehension generally as to the working of the leasehold system in London and elsewhere. Speaking for himself, he must confess he felt greatly prejudiced against it; but the last thing that would occur to him to suggest as a remedy for existing evils would be Parliamentary action. One of the chief evils seemed to him to be the power of the ground landlord to interfere. In that respect their system in Scotland was no doubt superior. There was no interference as long as there was sufficient value on the land to insure the payment of the feu, and it was hardly possible to think there would not be that sufficiency. The system was equivalent to a perpetual lease. The land was held to be the absolute property of the feuar, conveyed to him on the condition of the payment of the feu, and as long as he paid it there was no interference with the feuar, unless he came under certain covenants to do things under the feu-charter, which was often the case, viz., to secure the amenity of any locality, a condition that only dwelling-houses are to be erected, that the houses should conform to a certain plan, that a certain building line should be adhered to, &c.; as long as these conditions are kept, the land practically becomes the property of the feuar. It was a sort of compromise between the Spanish system absolutely to buy the land, and the English system. But it did not involve the expenditure of so much capital, and there was this immense advantage to the proprietor of the land, that he had no trouble in the collection of his feu duties, and no trouble of any sort. It was a question whether freeholders wishing to dispose of their land might not adopt the system in England. There would be a high ground-rent secured, a vast deal less trouble, and a freedom from the litigation which often arises on the termination of a lease. It was a question of assessing the value; but, as Mr. Blashill said, that was easily worked out. It was quite a mistake to suppose that, if a change were made, it would be cheaper for the community. Of course it would not; for if owners were going to give the land in perpetuity, they would charge more. It would be better for the architects in the country if the holdings were perpetual, and it would also be better for the ground-landlord.

Professor KERR remarked that Mr. Honeyman's idea that a change in value would be effected by a commercial transaction substituting an interminable lease for a terminable one was a mistake, for the value of anything was what it would bring at the time. A perpetual lease was a thing often granted in England, and the ground-rent was simply regulated by what the land was worth at the time. The terminable lease had grown up in England, not in any way arbitrarily, but as part of the business of the country. Scotland was far behind England, and it was a mistake to make any comparison between the two in a system of this kind. We had the leasehold system in London, where its evil effects were most noticeable. No doubt the disadvantages of the system were great and crying, and he agreed with Mr. Blashill that it was difficult to get rid of them. But he did not agree that Parliament ought not to interfere. The absolute freedom of landlord and tenant in the matter of contract was in theory very pretty, but in practice it was a matter that required regulation. When the typical landlord finds he has a tenant in his power, he is apt to use that power against his tenant. What he (Professor Kerr) thought would meet the ends proposed by the Broadhurst and other Parliamentary Bills would be an Act giving a statutory right of renewal of lease instead of purchase, in order to further the improvement of property in the interest of the possessors, and that would not interfere with the rights and prerogatives of the landlord. The value of the land was simply made by the public, by the extension of the town and the interests arising out of that extension, and increase of traffic. These things raised the value of land. The Crown, he thought, acted unwisely. He believed that Messrs. Howell & James in Regent Street had spent thousands of pounds on their premises, and applied for an extension of lease as an encouragement to lay out more money on the place, and it was flatly refused. In another case, also of Crown property, the premises were absolutely worn out, and an extension of lease was asked for and refused, and a handsome building had



all the same to be erected. In London, he believed there was a desire on the part of the landlords to stand well with the tenants. The Duke of Westminster's tenants were well satisfied with the terms on which renewals of leases were granted. The consequences of the extreme complications which existed in London leaseholds were shown in Regent Street. Strangers might fancy it was a street of beautiful houses. But the houses were merely whitened sepulchres—sanitary and other matters were bad, little rent could be derived from the upper floors of the houses, the occupiers took what they could get, and that was hardly anything. This was produced by two causes, by reason of the extreme complication by which any improvement of the tenant's was heavily handicapped, and secondly, because the house having been originally constructed in a flimsy way, the land was worth more than the shop and premises on it. The leasehold system seemed to have reached its absurdity in Regent Street. If the lessee really requires to renew the lease for the sake of his business, the landlord usually raises the rent by selling the man his own business. The administration of the law of dangerous structures had of late years become a considerable grievance to tenants, for the reason that such structures were likely to be houses near the end of a lease; and when the district surveyor, as the instrument of the Metropolitan Board, condemns part of a man's house, he is invariably told that the lease has only a year or two to run. He (the speaker) had put the question was there no remedy, no means in law or equity which could make the landlord rebuild the bad part of the house? There was, in fact, no remedy. If only a week before the end of the tenancy, the tenant must deliver up the house in full tenantable and habitable order to the landlord.

Mr. JOHN HEBB said it seemed to him that if there was no other argument against leasing land than that advanced by Professor Kerr, that alone was sufficient to condemn it. That it should be possible for a freeholder to go to a district surveyor to get a house condemned in order that he might enter into possession sooner was bad; that this had been done was certain. But there were other accounts on which the system might be condemned, that it led to flimsy, unsafe, and unsanitary building, &c., had to be demonstrated. Mr. Blashill tried to show that people preferred to live in houses hired, and not their own, but it should be attributed to the Englishman's dislike to live in one place long. If a person expended more on a property than he covenanted to do, the landlord reaped the benefit; he did not. Such conditions were also made that sometimes it was actually a breach of covenant for a tenant to improve his landlord's house. Legal action had been taken in a case of the kind. Such a system could not be a good system. It was not either a voluntary system, or something might then be said in its defence. If a man wanted a house in particular parts of London he must take a leasehold house. You must give up the house, with all its improvements, on the expiration of the lease. Corporate bodies and ecclesiastical bodies had no respect for persons. They all let to the highest bidder and had no respect for the late lessee. If a lessee could not renew his lease, his business was often extinguished, if only perhaps by having to move across to the opposite side of the street. The ecclesiastical authorities were notorious for this want of respect. Next came the City companies, who exacted the last penny.

Mr. WYLSON made some remarks on facilities for street improvements.

Mr. ARMSTRONG said he believed new property, especially a great part of suburban London, was being mortgaged for more than its worth. It was a serious thing that you could not improve your property without going to the freeholder, which drew down on you his solicitors and surveyors, which meant expenditure of money, every penny of which went in fees to the solicitors and surveyors, and not a penny into the landlord's pocket. These gentlemen ought to be paid by those whose interests they looked after.

Mr. T. OLIVER, of Newcastle-on-Tyne, said that in the north, more especially speaking of Northumberland, land was bought and sold as freehold. Being as it were between Scotland and England, they got the benefits and disadvantages of both systems. There were some instances where they had the feu system, but under another name, and cases also where they had the leasehold system, as in London. The Ecclesiastical Commissioners held a good deal of land in the county of Durham, and they had lately made arrangements by which they could enfranchise property where desired to do so. The current of popular opinion was quite in the direction to justify Mr. Honeyman saying they did not wish for Parliamentary interference.

Mr. MINYARD, speaking as a speculative builder, said he could build better houses on his own freehold land than on land under the present tenure. His experience was that convenience of position, rather than the merits or demerits of the building, carried the day with the public. And, again, in regard to two houses similar, except as regarded amount of rental and good construction, the house which came 10% cheaper than the other would be chosen. Why did not the public build for themselves in the same way as they did everything else—their tailoring, &c.? It was by reason of not being able to buy freeholds, and because leaseholds

were hampered by too many adverse conditions. Value of land was determined by present tenure. Land worth 8% an acre, as good market garden land, he had put up property on, and stood committed to pay the freeholders 2,000% a year. Thus an artificial famine price was created for land, and at the end of the term one was swept out of it all. He sold the property, but his selling did not release him from responsibility to the freeholder, who could sue him and his heirs if necessary. It was so exceedingly difficult to get new plans and elevations passed, that it was the easiest way to go on in the old ruts and grooves. He thought it was admitted by all in the room that the present tenure was bad. Perhaps landlords would grant in perpetuity on condition of an increased ground-rent. He thought freehold purchase should be made compulsory, as in the case of land required for railways. If every one built on his own freehold, he would build according to his own tastes and requirements, and the present monotony of our streets would give place to picturesqueness.

The CHAIRMAN said that in the course of an extensive practice of surveying he had acted for corporate bodies, and, though they did look keenly after their own interests, they were not illiberal, and did not attempt to squeeze out the uttermost farthing. Neither was it the case that when a lease expired you would not get it renewed. They rather attempted to help the tenant in possession. His view was that every consideration should be paid to the owner of the land; and if it were said that circumstances—the public, the traffic, &c.—increased the value of the land, he did not hold that, because circumstances had changed the value, the owner was not to have the full and entire value of that change. In London building was a thoroughly commercial speculation. Builders took land with their eyes open; they knew precisely what they were going to do, and how much they would make by investing their capital and energies in it, and think of little else. The freeholder contented himself with 3 or 4 per cent.; while the builder was making 7, 8, or 10 per cent. In almost all building transactions, even with great corporations, city corporations, who built large offices—but would not build on freehold—it was the case that directly the lessee got his lease he mortgaged it, and even then made his percentage. Londoners had not any more trouble in collecting their rents than there was in the feu system. It was not, however, his intention to formulate any principle to supersede the existing system; what he had meant was to put before them the results of his experience.

Mr. PANSON then vacated the chair to be in time to keep an appointment, and in his place the chair was taken by Mr. Fowler.

Mr. T. H. WATSON said that what was wanted was not an absolute right for any person in a building estate to purchase any lot, for he might do something to injure or annoy his neighbours on the estate, and that seemed to him to be the principal defence of the leasehold system.

Mr. W. EVE said one point had been lost sight of on the side of the leaseholder, and went on to point out that the leaseholder might invest the sum of money saved by the purchase of the leasehold instead of the freehold; as a leaseholder he was not to be pitied if he had neglected to take the ordinary caution of guarding against eventualities.

Mr. BATEMAN referred to the system adopted in Birmingham, on land belonging to the corporation; although the term of the lease was about seventy years, tenants were willing to erect expensive buildings on the site.

The Chairman, Mr. FOWLER, in summing up the discussion, said that for some years he had had the management of a building estate, and so spoke with some experience, and the conclusion he derived from that experience was entirely adverse to the views of the Broadhurst and similar Bills. The meeting then adjourned.

#### Associates and the Institute.

In the afternoon there was a visit to the Architectural Association, an institution which is deserving of more support than it has hitherto secured.

At 4 p.m. a meeting of Associates of the Institute was held at Conduit Street. Mr. R. M. Roe was chairman. We are unable to find room for the speeches this week, but the following resolutions were carried:—

I. "That in the opinion of this meeting, the Royal Institute of British Architects, just completing its fiftieth year, should become more generally representative of the profession." Moved by Mr. Woodward, and seconded by Mr. Hugh McLachlan.

II. "That in furtherance of the foregoing resolution it is desirable that some voting power shall be conferred upon the class of Associates." Moved by Mr. G. Richards Julian, and seconded by Mr. J. Osborne Smith.

III. "That the Council and Fellows of the Institute be memorialised to consider the best means for revising the Charter and By-laws to give effect to the wishes of this meeting as expressed by the resolutions." Moved by Mr. H. Hardwick Langston, and seconded by Mr. Sidney Young.

IV. "That a Committee, not exceeding twenty-one members, be appointed by this meeting to carry out the objects of the foregoing resolution." Moved by Mr. S. H. Blagrove, and seconded by Mr. G. H. Pryce Cuxon.

V. "That a Committee of the following gentlemen (with power



to add to their number, not exceeding twenty-one) be appointed to prepare and present the memorial, and take such further steps as may be necessary, seven to form a quorum:—Messrs. G. R. Julian, Hugh McLachlan, H. H. Langston, Sidney Young, S. H. Blagrove, H. P. Monckton, J. Osborne Smith, E. E. Hollis, J. P. Power, J. Malcolm, T. E. Munday, and G. A. Pryce Cuxon."

VI. "That this meeting believes that if the Charter be altered, powers ought to be given to country members to vote by letter or otherwise, and in the interests of these members the question of payment for quantities should be taken into consideration." Proposed by Mr. John B. Gass, Bolton; seconded by Mr. H. H. Stannus.

The fourth meeting in the evening was largely attended, owing to the circumstance that papers were to be read on three such renowned architects as the late G. E. Street, William Burges, and Eugène Viollet-le-Duc. The first paper was written by Mr. Beresford-Hope, but in his absence it was read by Mr. A. W. Blomfield:—

#### George Edmund Street.

BY A. J. B. BERESFORD-HOPE, M.P.

The notable feature of the distinguished life which I am called upon to commemorate was its harmonious, calm progressiveness. No lurid glare of romantic adventure lighted up or obscured the career of George Edmund Street; no feverish throw for the last stake, despair and ruin shaking the dice against success and honour, is there to tempt us to revel in the fallacious indulgences of word-painting. No dreary periods of obscurity gave fierce delight to unexpected bursts of hot prosperity. Ups and downs, of course, there were, success in this competition and disappointment in that one; carping criticism, and all other such episodes of rainy weather and storms which freshen the atmosphere of public life, and upon which it is the duty of every one to reckon who makes his choice for a public position. But in his professional career, which is all with which I am here concerned, Street's life was eminently one of a prosperity deserved, fought for, and achieved by a rare combination of industry, realised duty, buoyancy, will, and genius, in alliance with those gifts of manual dexterity in sketching so useful to the architect, who has always to be making himself understood by that Philistine public to whom elevations are masks not faces, plans deliberate frauds, sections aimless trifling.

The pupil of Owen Carter, of Winchester, in 1841, and then, in 1845, of George Gilbert Scott, Mr. Street found himself in 1849, and at the age of twenty-five, an architect with his own way before him to carve out, and so he carved away for every day of two-and-thirty years, till, after he had passed through the portal of the Royal Academy, that way ended in Westminster Abbey, where a funeral, only not a State one in the technical sense of the word, conducted to his grave the President of the Institute of British Architects and artist of the grand pile of National Law Courts. He began, as I said, to practise in 1849, at Wantage; in 1852 he went to Oxford, having been named Diocesan Architect by Bishop Wilberforce; and in 1856 transferred himself to London, which he never left—so nobly simple was his career, which would hardly have been possible except in some great centre of life. It owed none of its success to dexterous compliance with popular tastes. Perhaps in his younger days our friend was a little too fond of emphasising his independence. Street was a man of twofold convictions—a Gothickist and a religious architect, as the Church of England teaches religion. Here let me for a moment forget that I have for my audience the Conference of Architects, and travel back in memory to some far-off meeting of ecclesiologists, at one of which I had the great privilege of making Street's acquaintance.

#### Faith and Architecture.

As an ecclesiologist among ecclesiologists, I claim for Street—and not for Street alone, but for the owners of other cherished and honoured names, some still with us, and others resting from their labours—the credit of a rare example of truthful conviction, consistently acted out in the engagements of a lifelong career. I do not intend the slightest reflection on another theory of the architectural life; I honour the other conception of the architect's mission, that of subordinating personal predilections to the wants of the client, always with the reserve, of course, that the construction shall be good, and the design not ludicrous. The world could not go on without the existence of such an understanding. Indeed, the power of accommodating personal faith—faith, I mean, in things terrestrial no less than celestial—with professional want of prejudice, without forfeiture of self-respect, makes the world richer in its store of moral treasure. But yet I must be allowed to reserve peculiar personal admiration for the architect whose life of art is one long fearless creed, and who refuses to win fame or profit by ways adverse to the propagation of what he believes the highest truth. Architects of this type have been eminently the growth of England, and of the English Church of this century. Eminently—I say no more when I think of Pugin, to mention but one name. The ecclesiological promise of France seemed as bright as ours forty years ago. It has been interred in chill silence at the civil funeral of Viollet-le-Duc, while from the graves of Scott and Street at Westminster the voice of sure and certain

hope rises that our mission shall go on and prosper. But let me not stray into controversial by-ways. I could not refrain from these words without leaving my picture of Street incomplete. To say more might be needlessly to raise debate. The man for whom I have claimed this merit was no pale, spiritless dweller among the tombs, but, up to all but the last day, a stalwart Englishman of vigorous vitality, robust constitution, unflagging spirits, beaming with the beauty of healthful activity, awake to the calls of that life in which personal capacity ministers to public prosperity.

#### Mr. Street's Principal Works.

Let us briefly travel over the list of some of his principal works, after which I may offer a few remarks on the lessons which they teach. I dare not open the multitudinous roll of churches which have passed under his restoring but reverent hands with no detriment, except, it may be, in those early days when all were learners together. It is enough to name some principal works, such as the south transept of York Minster, Carlisle Cathedral, Kildare Cathedral, St. Canice Cathedral at Kilkenny, the noble churches of St. Peter Mancroft at Norwich, Clun, Welshpool, and Hythe. The recasting of Christchurch Cathedral, Dublin, and, still more emphatically, the nave of Bristol Cathedral, are works in which the original element is too large quite to justify us in calling them "restorations;" nevertheless no other more appropriate word occurs. Of new churches due entirely to Street's inventive genius the earliest which calls for notice is St. James the Less, Westminster. All Saints', Boyn Hill, Maidenhead, with the adjacent block of almshouses, soon followed; then All Saints', Clifton, noteworthy for its noble span. Then come St. Mary Magdalene, Paddington; St. Philip and St. James, Oxford; St. John's, Torquay; and, of a later date, Kingstone, Dorset; a series of churches in the East Riding of Yorkshire for Sir Tatton Sykes; St. Saviour's, Eastbourne; St. Margaret's, Liverpool; St. John the Divine, Kennington; the Garrison Chapel, Portsmouth; with the chapel at Dunecht; and his own particular church, St. Mary, Holmbury, near the beautiful retreat which he had built for himself. Abroad, Mr. Street constructed the Memorial Church at Constantinople; the American and the rising English churches at Rome; and he designed the American Church at Paris. Such are, perhaps, his most conspicuous churches; while there are two cathedrals which only exist on paper. The beautiful design which won the second prize at the international competition at Lille in 1856 is well known—better, probably, than the design for Edinburgh Cathedral, completed in 1872, which I have no hesitation in saying seemed to me of the highest merit; while, perhaps, its distinguishing qualities were those which caused it to be rejected—namely, its modesty and its scrupulous adherence to the stipulated price. Mr. Street, with much precision, grasped that smaller ideal of cathedral which is found in those parts of these islands which are not England, as at Kilkenny, Llandaff, and Dunblane, and reproduced it under conditions which left the building every inch a cathedral. However, a less original rendering, of the usual English type, was preferred.

#### The Guards' Chapel.

I must now note two works which do not quite fall under restorations or new churches. First comes an effort of great ability and courage—the recasting of the interior of the dreary Guards' Chapel, which stands up like a starveling Greek temple in Birdcage Walk. The problem was to transfigure the inside, while he was bound to leave the exterior in all its old hideousness. So there it now stands, all glorious within, full of thoughtful artistic beauty—a church admirably adapted for Anglican worship, displaying loving care in every detail. Gothic would have jarred too harshly with the inevitable outside, so Street worked in a style in which Romanesque, referring backward even to San Clemente, is handled with an originality and an avoidance of anachronism which makes it incontestably appropriate to its age, its country, and its peculiar use.

The other speciality of which I may speak is the storied reredos (containing Redfern's masterpieces of sculptured groups), which, together with Pugin's window, fills the east end of St. Andrew's Church, Wells Street.

#### Colleges, Houses, &c.

Of religious buildings not churches, his earliest was the Theological College, Cuddesdon,—very picturesque, but no doubt too crowded. Later, and of broader design, comes St. Margaret's Convent, East Grinstead; while of works purely secular, let me first name the design which won a prize more than a quarter of a century back in the competition for the Foreign and War Offices. Dunecht House, Aberdeenshire, is highly spoken of, and a Gothic house in Cadogan Square does noble battle with the envying phalanx of Queen Anne conceptions. I pass over various parsonages and schools. Mr. Street's own house on the flank of Holmbury, Surrey, shows a masterful handling of the homely picturesqueness of the Tudor phase of our old national style. In another competition, the limited one for the National Gallery, Mr. Street was not successful, and truth compels me, as one of the judges there, to say that I do not think his design was one of his happiest inspirations. But a far more important competition



was proceeding at the same time, the one for the Courts of Justice, and it is best to sum up this momentous chapter in the history of national architecture by saying that it has enriched this generation and this city with Street's great masterpiece in the Strand,—a masterpiece of which we may be well proud, in spite of the mutilations to which it was subjected by official ignorance and parsimony.

#### *Writings.*

I will not weary you with any longer list of those beautiful works sown broadcast over the land, in every place, so to speak, except, I grieve to say, Cambridge; but I turn to Street's literary work. I shall not attempt even to epitomise the long schedule of articles, papers, lectures, reports, and pamphlets which dropped from his pen, winding up with that noble legacy, his very last effort of active intellect, the presidential address at the Royal Institute of British Architects, of November 1881. Street has endowed architectural literature with two books. "Brick and Marble in Italy" first appeared in 1855, and made its author's name generally known. A second and enlarged edition appeared at a much later date. The second work is "Gothic Architecture in Spain," which taught the superficial traveller that he had but touched the fringe of Spanish Mediæval architecture by visiting Burgos, Toledo, and Seville, if he left Santiago, Gerona, and many other noble minsters unvisited. Spain in Street's hands was no longer a Renaissance country with Mediæval exceptions, but as truly Gothic a country as England, France, or Germany, and with closer affinities to them in style than Italy.

#### *Variations in Style.*

What are the lessons which we can draw for our benefit from this long record of prodigious brain activity? There are many, both artistic and moral, and there is one in particular which partakes of both natures, and which admits of concise statement, I mean the openness to conviction, the independence of mind, and the absence of false pride which led Mr. Street to change his style when he saw reasons to believe that he was marching along the wrong road. The pupil of Scott and the child of the Ecclesiological Society, he started in life with art principles of the more rigidly English orthodoxy. But he was actively and rapidly receptive, and his Italian tour wrought a great change in his views, and he returned full of the adaptability to home wants of many seductive features of Italian Gothic—cornices, plate tracery, brick and marble interchanged, and so forth. Of this influence St. James-the-Less, Westminster, is a notable instance, and signs of it are found in his offer for the Public Offices, in Cuddesdon College, and in Boyn Hill Church. Many architects followed in his wake, and the success of Italian Gothic seemed secured—not as an interesting and fruitful object of study, that it always must continue till taste and research are hissed off the stage—but as a style desirable to be used in England in conscious preference to the traditionary native forms. Though the building is not by Mr. Street, I may point to the Scientific Museum at Oxford as the climax of this phase of taste. Few as are by comparison the years which have gone since this building was hailed as an architectural revelation, they are nearly as remote as the days of Chambers and the Adam family—perhaps more so. By-and-by Street's candid mind and clear intellect realised that workaday Italian Gothic was for England a caprice, and he bravely returned to the purity and elasticity of the Edwardian style, only retaining, as he had a full right to do, the greater variety of materials in marble and brick and mosaic, which modern commerce and processes had made available, and which could be developed on the lines of English composition with as much truth as upon those of a foreign style.

For a man to change once is not so uncommon, and the action may either show wisdom or the reverse, or simply come of unconscious drifting. But for a man to retrace his course after such a change is either instability or heroism, and Street's practical retraction of that propagandism of Italian Gothic in which he had shown himself so personally successful partakes of the latter quality. Such changes might be comparatively easy with the architect who is personally above detail, or who, in other words, is too lazy or too busy to attend to the minutiae of his own buildings. Street was none of these. He felt profoundly that the whole was made up of its parts, that *ensemble* and detail helped each other; while bad, coarse detail might blur the merit of that which in the rough had been a powerful conception. So with cheerful, unremitting toil he laboured away, not merely at mouldings and foliage, and so forth, but at furniture, fittings, and all accessories, ornamental or practical, in all the various materials, which may be briefly summed up as sculpturing, handling of metals, enamelling, the use of crystals and gems, woodwork, textiles, painting on glass or walls, or tablets, or on other varied objects, like a true ecclesiologist as he was. There can, I fear, be little doubt that he shortened his life by the enormous toilsomeness which he imposed upon himself at the Law Courts in his determination to make them perfect at every point.

The question has sometimes been asked whether such subsidiary designing is a legitimate portion of the architect's profession. I can only wonder at the narrowness which seems to me to prompt the doubt. The architect surely is *poïetes*, and his

work a poem; and, as every poet who loves his work strives to make it as polished and perfect as he can in every stanza and every line, so ought the architect to act. Architect, we know, means chief workman, and to the chief workman must belong the direction of all the work. But perhaps the architect feels that some one else can more successfully handle these accessories than himself. If so, he is right to use that superior gift, but in so doing he so far admits his colleague to a partnership in the poem.

All through Mr. Street's career his fidelity to Gothic was so immaculate that I believe he only twice in any original design strayed even into Norman or Romanesque—in the private chapel for Lord Crawford at Dunecht, and in the Guards' Chapel, where the choice was inevitable. Never so much as with the tip of one finger did he ever touch the so-called Queen Anne style.

#### *Mr. Street as President of the Institute.*

Before I close I must speak of the latest, and in some respects not the least noble, episode of Mr. Street's life—that of his elevation to the dignity of President of the Royal Institute of British Architects, and his discharge of its exalted functions. The Institute is a commonwealth, and, like other commonwealths, it has its parties and its schools of opinion, both in matters administrative and upon artistic questions. Without such liberty of thinking there could be no life in the body. "Thou hast no tides, poor soulless sea," would be the contemptuous verdict passed upon it. Now no man enjoyed, as I have shown, the luxury of believing his own and disbelieving other people's opinions to a more robust extent than Street; and so it happened that his election to the chair of the Institute was not the unanimous tribute at the visible close of a long life to the venerable deserts of the old man eloquent of pencil as of voice, but the result of a healthy party fight to choose the leader who should, as vain man anticipated, arise, in all the power of a life mature and not declining, to hold aloft for many years the standard of his convictions. So Street won by a very narrow majority. But then came the marvel. The shadow, luminous and mysterious, seemed to have been projected. The old mind of the buoyant party man was there, but purged, enlightened, elevated. The impartial care for all that was for the good of architectural men, architectural art, architectural ministration to the welfare of society, as embodied in the Architectural Institute, was the President's duty and delight. Appreciative of all excellence, peacemaker in all perplexities, he succeeded during those few months of office in winning the influence, esteem, and affection of all; and in the sad day following quickly on his death, I heard general regrets at the irreparable loss fall from the lips of those who had certainly in past years not mounted his colours.

The CHAIRMAN asked whether any members would like to offer remarks. He had one observation to make, and it was that Mr. Street had been credited with the restoration of Carlisle Cathedral, whereas he (Mr. Christian) had restored it. Mr. Street's part consisted of a reredos and some works at the frater.

#### **The Works of the late W. Burges, A.R.A.**

BY GEORGE AITCHISON, A.R.A.

In 1853, when I was a student in Rome, I made the acquaintance of Captain Drummond at the English Academy. As soon as the season was over he used to give picnics to the English artists and residents who still remained in town. Some place of antiquarian interest was picked out at a riding distance from Rome, and most of the company went on horseback, but there were carriages for those who preferred driving to riding. On one eventful summer morning it was agreed that I should go to Gamgee's stables, with a friend who kept his horse there, and get a mount, but being rather late I found every horse but one gone; this horse had been ordered by a gentleman of unknown name for an hour before, but as he had not come for it, we persuaded Gamgee to let me have it. We joined the cavalcade at the Porta del Popolo, and a few hours' canter brought us to La Storta; while we were waiting for the guide the carriage arrived. A short man, with light curly hair and spectacles, was objurgating the man who took his horse. I was the culprit, and the objurgator was Burges. However, we settled the matter amicably, and as he preferred going back in a carriage, I had the painful pleasure of returning on the beast that brought me. We examined some of the ruined walls of ancient Veii, and entered the tomb of the Lucumo, whose skull and bronze helmet, pierced through and through with the bronze javelin head, still reposed upon a central slab; the tomb was cut in the rock, the central chamber being domed and adorned with rude wall-paintings, on which Burges descanted. We then discussed our luncheon, and rode home in the cool of the evening. Of that merry company, amongst whom were G. Mason, Poingdestre, Whitburn, Eagles, &c., how few remain!

#### *Burges in Italy.*

I saw but little of Burges in Rome, but I saw and admired his designs for the church ornaments to be used in Sir Frederick Leighton's "Procession of Cimabue's picture." At Sir Frederick's suggestion, Burges and I travelled together when we left Rome after the Holy Week in 1854, and took our farewell of Mount



Soracte. We travelled in *vettura*, the lumbering hackney coach drawn by two wretched hacks that with difficulty drag you twenty miles a day, but this mode of travelling gives you an ample opportunity of seeing the country you pass through, and the towns you stop at. We passed through Sta. Maria degli Angeli, and saw the church, rent by an earthquake, and the miserable inhabitants camped in temporary wooden barracks. At Assisi we made our first long stay; the hotel being full we stayed at a private house, at the modest cost of 1s. 7½d. per day, our landlady explaining that as we were English gentlemen accustomed to luxury she could not charge less. Poor Burges suffered there from a continued diet of pigeons stuffed with rosemary. After exploring the town, and getting a pair of 5-foot rods made by the carpenter, we made studies of the painted decorations of the churches of St. Francis. In our spare time we strolled the town, read Dante and Sacchetti, discussed art, and had our first experience of a slight earthquake. We then went to Perugia, and saw the Sala del Cambio and other buildings of importance, and then took the *diligence* to Florence, discussing the Roman defeat as we passed Lake Trasymene.

Our plan was to read Murray on the way, mark the objects of interest, on our arrival to go up the highest tower and see the town and its surroundings, and then to explore the town, visit the places we had marked, take notes, and measure such things as we thought would be useful.

Burges was then thoroughly versed in the Gothic architecture of England and France, and had come to Italy mainly to study architectural painting and mosaic, goldsmith's work, and secular buildings, as he despised the Gothic architecture of the Italian churches. After seeing Florence we went to Siena, measured the Palazzo Tolomei and other palaces, went to San Gimignano delle belle Torre, visited Boccaccio's house at Certaldo, went to Pisa, and, while Burges sketched in the Campo Santo, I measured an old brick palace there, the Café del Usso. We then went to Pistoja, measured the Palazzo della Comunità and the Paliotto, that splendid altar-front of gilt silver and enamel, made to replace the one stolen by Vanni Fucci and his friends. We then went back to Florence, measured the battlements of the Palazzo Vecchio, the staircase of the Bargello, and other parts of interest, and here Burges was laid up, and I measured the Palazzo Salviati, went to Prato, and to see some friends in the country, while he designed and executed a book-cover for Tennyson's poems. As soon as he was well we went back to Pisa, and saw the magnificent festival of St. Ranieri, which only takes place once in seven years, to commemorate his return from the Holy Land. The crossings of the streets through which the procession passed were carpeted with flowers in patterns, and at night the whole town was splendidly illuminated, so that when we left after midnight for Lucca, Pisa looked like a town of fire. We went from Lucca towards Modena, but where the countries join on the mountains, we were stopped, and found that we must either go back or hire a military escort, on account of the cholera in Tuscany; and though we thought this a curious sanitary precaution, we were half inclined to incur the cost, as we thought our parents would be flattered by our making a sort of royal entry into Modena guarded by a troop of horse soldiers; but economy prevailed over vanity, and we went to Leghorn and took ship for Marseilles, stayed at Lyons, thence to Beaune, where we measured the roof of the hospital. I let down the keys of this loft, tied on to a tape, through a hole in the floor, to see how high the roof was above the stone pavement; their jingling on the stones, and then ascending, was taken by one of the patients for a sign, and we had much bother to persuade the abbot to let us continue our measurements. As we were both in blouses, and black as sweeps, our appearance was not in our favour.

#### *In France.*

Thence we went to Dijon, where we measured the porch of Notre Dame, and the front of the Hôtel Chambellan. It was arranged between us that we should do no work on fête days, but always take a stroll in the country; but, in point of fact, I do not think we ever did; for, before we even reached the suburbs, Burges always espied a by-street that promised to contain some archaeological treasure. He had long been anxious to find an example of the red cloth put under pierced ironwork, and in one of the French towns we found a pierced knocker-plate in a back street. He explained the case to the occupier, a smith was found at a neighbouring wine-shop, and the knocker and its plate were taken off, and sure enough under the plate was found a piece of cloth, blackened for the most part, but with a bit of scarlet here and there, where wet and dust could not penetrate.

From Dijon we went to Troyes, and measured part of the cathedral, which was under repair. We then went to Ville Neuve L'Archevêque, and thence to Sens, where we saw the "Anthropophagi and men whose heads do grow beneath their shoulders" sculptured on the porch of the cathedral, and here we parted—I to go to Paris, and afterwards back to Italy, and Burges to Chalons-sur-Marne, and elsewhere.

#### *Biographical Details.*

During our travels I learned he was born on December 2, 1827, that his father was the well-known engineer of the firm of Walker & Burges, that he had matriculated at the University of

London, had attended some lectures on engineering at King's College, that in spite of his father's desires and the splendid prospect open to him if he became an engineer, he was so full of love for antiquarianism and Gothic architecture that he would be nothing but an architect; that he had been articled to Blore, had afterwards been with Sir Digby Wyatt, had sketched in England and elsewhere with Mr. Salter, measured Amiens spire with Mr. Warren, had travelled in France with Mr. H. Clutton, and helped him with the illustrations of his "Domestic Architecture of France," and that through the advice of Mr. Bruce Allen he had determined to measure everything important, and find out its whole method of construction. When I met him he was a rabid Mediævalist, and believed there was no salvation out of the thirteenth century. Sir Digby Wyatt had nicknamed him "Troy," because when it was suggested to Burges that he should make a view of Troy, he said that, in accordance with the custom of the Middle Ages, he should make all the architecture of the thirteenth century.

#### *Archæological Lore.*

He was so profound an archæologist that he used to jeer at Blore for declining to give his opinion on the age of a wall because there were no mouldings on it, saying he should have known by the size, working, and bonding of the stones, and the mortar joints, to what age it belonged.

You may easily imagine his scoffs at the Pagan architects of the Renaissance, and his hope that some day "he might make that old wretch, Sir Christopher Wren, turn in his grave." He did, however, allow there was one Pagan architect living that he respected—Professor Cockerell—though he added there is so little to learn in the style that the merit is small as compared with learning the Mediæval style.

I have always looked upon it as one of the privileges of my life to have had the chance of being constantly with this genius for so long a period. Unfortunately, biographical sketches of men of thought are necessarily dull; the flame of genius can only be seen in their works, and those workings in the alembic of the mind by which new products are distilled from the materials provided, are necessarily hidden from mortal eyes; the exact portraiture of the man cannot be given without offence during the lifetime of the persons to whom he was dear.

The minute, exact, and profound knowledge of Mediæval architecture, decoration, furniture, and letters that Burges had acquired was tempting him to produce a treatise on them for the use of students, when the publication of Viollet-le-Duc's "Dictionnaire" took the wind out of his sails—perhaps fortunately—for the publishing architect was turned into the practising one. But we are now speaking of him in the embryo state. He was then one of the most rapid and brilliant draughtsmen I ever met with, and had the most inexhaustible fund of invention; illustrations of literary incidents, designs for chalices, crosiers, knives, scent bottles, comic alphabets, caricatures, Mediæval towns or buildings, came forth from his pen, pencil, or brush, without a moment's reflection; and although his humour was shown rather by his drawings than by his words, he would on occasion give vent to epigrammatic sentences. "Academies are the death of art" may be instanced as one of them.

#### *Châteaux en Espagne.*

At this time his one besetting fear was lest he should be carried off by accident before he could show the world his genius and his knowledge; his one great hope that he might hereafter partly realise in a house of his own his views of artistic completeness, and no Arab ever had more gorgeous visions than Burges. This visionary house was to be of perfect Mediæval pattern, full of quaint carvings, and blazing with colour, hung with costly stuffs embroidered in gold, and lighted by silver lattices whose storeyed panes were of cut gems. He was to have jewelled chalices to drink from, and aloe and sandal wood to burn.

Even the castle building of so eccentric a man of genius seems to me to have its value, as giving us some insight into those powers he felt himself possessed of and that he most wished to exercise. Well, it was this: he would be first an architect and build a specimen of every ordinary human construction except a cathedral; he would amass enormous wealth, and spend some of it in realising his views in his own house; he would marry; he would, as soon as these varied works were done, become a member of Parliament, and correct some of the abuses of society; he would then go into the Church, become a bishop, and with his wealth build a perfect cathedral of the most costly materials, adorned with the most perfect specimens of all the subsidiary arts; and, when this was done, he would end his days as a monk or a hermit.

#### *Lille Competition.*

He returned to England, I believe, at the end of 1854, and I in the spring of 1855; he had then designed a claret-jug and a jewel-coffer for a client, and in the same year he entered into competition with Mr. H. Clutton for Lille Cathedral. In March 1856 I went with him to Lille, and saw the competition drawings, and we afterwards went to Tournay. It is said Viollet-le-Duc at first believed that Clutton and Burges's set were some old drawings of the thirteenth century, until he saw "Whatman" on the paper.



For once, Burges met his match at repartee, which was no small thing, for when angered he was like the bee, *ponit animam in punctu*. He was fond of talking to workmen, and was always anxious to know of them how long they thought it would take him, the accomplished architect, to learn their trade. On this occasion he went into the kitchen of our hotel at Lille and saw the cook, a little hunchback. And after Burges had explained who he was, and that he expected to have the cathedral to build, he asked how long the cook thought it would take to learn cooking thoroughly. "Ah, sir! in a fine art like mine one is never master of it; one is always learning."

#### English Work.

In 1857 he restored some of the images and designed others for Salisbury Chapter-house, and restored the building in conjunction with Mr. H. Clutton. He gained the first prize for the Memorial Church at Constantinople in 1859; he designed the cathedral for Brisbane, restored Waltham Abbey, and in 1862 gained Cork Cathedral in competition, altered Gayhurst House for Lord Carington, and delivered the Cantor Lectures at the Society of Arts; in 1864 he decorated Worcester College Chapel, Oxford; in 1865 he began the restoration of Cardiff Castle, and built a house for Mr. McConnochie at Cardiff; in 1866 he designed the School of Art at Bombay; in 1867 he competed for the Law Courts, and published a book of his designs for them. In 1869 he built Knightshayes for Sir J. H. Amory, Bart.; and in 1870 he built the church at Studley for Lord Ripon, and that at Skelton for Lady Mary Vyner, and published his book of architectural drawings, containing many of the examples we measured together. In 1872 he began his series of drawings and models for the decoration of St. Paul's Cathedral, London. In 1873 he competed for the cathedral at Edinburgh, and made the drawings for Hertford College, U.S.; built Templebrady Church, Ireland, and the Speech-room at Harrow. In 1876 he began to build his house in Melbury Road, the internal decorations of which were not completed at his death. His last work was the additions to the Maison Dieu at Dover, to convert it into a Town Hall, since completed by Mr. Pullan.

On January 28, 1881, he was elected an Associate of the Royal Academy, and he died on the 20th of April of the same year. Rarely has any architect been followed to his grave by so many mourning friends, mainly architects from all parts of the country.

A book of his designs was published last year by Mr. Pullan, his brother-in-law.

#### The Gothic Revival and Burges.

It seems to me that there are now only three points for our consideration—the effect of his works and teaching on public opinion, on the younger men of the profession, and the merits and peculiarities of his works. Horace Walpole, in the middle of the last century, advocated the return to Gothic architecture as a patriotic and antiquarian revival, and made rude attempts to apply Gothic ornament and surface decoration to buildings. His notion spread, but it was not till nearly the second quarter of the present century that this antiquarian revival was passionately advocated; and this outcome of late Roman Catholicism was called "Christian," while its supporters poured out floods of obloquy on those who admired or practised any other style.

Augustus Welby Pugin began the onslaught with his "Apology for Christian Architecture," and the public, who are always interested in a literary conflict, especially if the *odium theologicum* can be imported into it, were easily converted to Gothic, as all forms of beauty were equally indifferent to them, and the advocacy of Gothic supplied them with staple for discussion and abuse. The battle was kept alive by such generals as Sir Gilbert Scott, Street, and Burges, and such was the enthusiasm of the first and last for Gothic that nothing but great temptation would make them abandon it. Burges, who was the youngest, ablest, and most learned of the three, naturally produced a powerful effect on the public, though by some ill-luck he never got his fair share of the large works carried on. The effect he produced was not a little assisted by his quaintness and pungency of expression; yet in spite of all this passionate advocacy, other influences were at work which silently but surely sapped the foundations of this new Jericho, whose walls at last fell without even the sound of a trumpet. It was generally felt that dignity and simplicity were more allied to our present civilisation and turn of thought than Gothic perplexity. For constructive purposes the introduction of iron had superseded the methods used in the Middle Ages, and the advancing arts of painting and sculpture found themselves too incongruously surrounded in Gothic buildings to be used with effect, even when their highest forms were not resolutely excluded by the architects themselves. The simplicity and matured elegance of form in the higher works of painting and sculpture supplied an inconvenient standard of judgment in Gothic buildings. These considerations had, however, but little effect on the young and ardent enthusiasts of Gothic, steeped to the lips in the diatribes of Pugin and Ruskin. Burges's pupils and young admirers drank in with undoubting faith the precepts of one who was so enthusiastic, so certain, so skilful, and so learned, and they were quite prepared to accept the architecture of the thirteenth century as the ultimate standard of perfection, for were they not

always hearing the master say, in criticising any new work, "I ask myself what a thirteenth-century architect would have done in this case?"

#### His Style.

I never saw any of Burges's designs for buildings that were made before he went to Italy, and while he was there he did not fail to appreciate the grandeur and massiveness of its palaces; and, as he absorbed the good from all the Gothic examples he saw, his work for ever after bore traces of that influence. In the same way he was impressed with some Arab forms, which he afterwards rarely relinquished. Another marked peculiarity was his fondness for circular forms, and it was rare indeed to find any considerable building in which this fondness was not shown. Nearly all his designs for cathedrals show his preference for the circular end over the square. The Law Courts and his own house show in a marked way this tendency.

His works, or at least those in which his judgment was unfettered, exhibit his predilection for vigorous simplicity; better examples cannot be given than Mr. McConnochie's house, at Cardiff, and the Harrow Speech-room. If the Law Courts were to be Gothic we must all regret that he was not entrusted with them, as, in his design, the Strand front was a grand composition, and the proportion of the parts noble. Even Sir G. Scott, a rival competitor, speaks of it thus:—"While Mr. Burges, though his architecture exceeded in merit that of any other competitor, was, nevertheless, eccentric and wild in his treatment of it." How the Government could have passed him over when they had such a genius to their hand is difficult to understand, and the plea that his plan was bad is well disposed of by Sir Gilbert:—"An able and artistic architect can surely make a good plan, while no amount of skill in mere planning can by itself enable a man to produce a noble building"—a truth that those who have the disposal of our new public buildings should take to heart.

Burges's skill, however, was by no means confined to pure architecture; his inexhaustible invention was shown in his church ornaments, in the accessories to houses, and in the quaint designs for figures and figure-subjects with which all his works were over-spread. Perhaps the stained-glass windows of his own hall afford one of the best illustrations of his skill and inventiveness in this direction. The subjects are the spirits of Sound floating out of the ringing bells. His devotion to one phase of art may be well recommended to the student; his desire to master all the cognate arts may be pressed on the attention of those whose genius will enable them to imitate him, and we have but two regrets to add—one, that a man possessed of so strong a personality did not leave an autobiography; and the other, that we have not more of his executed works.

#### Viollet-le-Duc as Architect and Art Historian.

BY MR. WETHERED.

Busily engaged in another profession, and long enough in sympathy with your pursuits to be sensible of my many shortcomings, it is only by the courtesy of the Council of this Institute that I am now permitted to direct your attention for a short while to some aspects of the life-work of the gifted man whose name will be associated for ever with the architectural glories of France. I must ask an assemblage like this to accept in a spirit of kindly criticism the scattered observations of an outsider who happens to have seen a good deal of the executed work of the master whom to know was to regard with feelings of veneration and affection. To this word of self-introduction I may add that I hope my present paper will be supplemented before long by another, entitled "A Fortnight with Viollet-le-Duc in Switzerland," which will comprise a sketch of his striking personality and a further glance at his manifold powers.

Eugène Emanuel Viollet-le-Duc was endowed with widely-contrasted gifts, only bestowed together in fullest measure on minds of the first order. He was at once an intense realist and an idealist. He possessed the scientific bent for getting at the core of the facts of nature, and he had also the expressional and shaping faculty which can reveal emotional truths through the language of art. The works of a deceased master are an abiding presence, and in them we speak of him as historically living. In thus approaching Viollet-le-Duc in his twofold capacity of architect and historian of art, I can do no more now than take a swift run across the *vrai domaine royal* claimed for him by Sainte-Beuve, over which he equally holds sway as master of "the compass, the pencil, the chisel, and the pen."

Turning first to two or three of his written and illustrated works which come well within the scope of this Conference, I will then pass on to speak briefly of the artist who creates of himself, and who also brings the buried forms of the past back to life.

Art with him was a strong instinct from his very cradle, and his family surroundings were well fitted to nurture the growth of a child of genius. His father was a man of mark in literature, and his uncle, M. Délacluze, an artist of distinction. Every week at the house of one or the other he met some of the most gifted intellects of France. At these *réunions* he made in his earlier years the life-long friendship of Thiers, Rémusat, Mérimée, Ampère, Villemain, Stendhall, and others known to fame. Always on the



alert, we may be sure the receptive mind of young Eugène assimilated innumerable ideas from listening to the best literary and philosophical talk of the day. His education had breadth and thoroughness by no means common fifty years ago. It was completed by more than one lengthened stay in Italy, and supplemented by a course of dissection at one of the medical schools of Paris, in order to obtain a practical knowledge of anatomy in relation to external form. Always self-reliant, by the time he was eighteen he had made more than enough pocket money by his water-colour drawings and modellings to buy himself a horse, and with this helpful companion the young enthusiast in art made the first of a series of journeys which enabled him to visit, measure, draw, and describe the chief ecclesiastical, military, and civil buildings of the Middle Ages over the greater part of France.

#### *Viollet-le-Duc as a Writer.*

Here the boy was father to the man, and the immense mass of materials thus collected in his youth laid the foundation of his *opus magnum* so well known to you, the "Dictionnaire Raisonné de l'Architecture Française," followed by its complement, the "Dictionnaire du Mobilier Français," forming together sixteen volumes, illustrated by nearly 6,000 engravings, finely drawn on the wood by himself. For the archaeologist and student of history these volumes unlock the vast treasure-house of the Mediæval world. Given a building of ancient France, to take an instance of the thoroughness of his insight and teaching, he is not content with settling the date, and describing the external characteristics that determine the style or school; but, if I may apply surgical terms, he submits it to careful dissection, and repays us with the knowledge of its anatomy and physiology, the structure of the whole, and the functions of its various members. Unfolding its origin he presents it as a product of evolution; as a more or less perfect type of a phase of development; and as the logical expression of the needs, customs, aptitudes, and aspirations of a people.

Mr. Street has gracefully acknowledged his leadership in these researches in his "Gothic Architecture in Spain":—"M. Viollet-le-Duc's articles in the 'Dictionnaire Raisonné,'" he states, "on the planning of French churches, are extremely valuable, as indeed is all that he writes; and I take the opportunity afforded me by the aid which he has thus given me to express the gratitude which, I suppose, every student of Christian art feels for what he has done towards promoting its right study." Not a few of the articles are complete essays: that on mural painting, according to M. Véron, editor of *L'Art*, is a veritable treatise on chromatic harmony by a man thoroughly master of the subject. It contains a multitude of facts as interesting as they are little known. Mérimée, in a learned review, extolled alike the prodigious fecundity of the writer and the force and finish of the draughtsman.

His "Lectures on Architecture," so ably translated by Mr. Bucknall, twenty in number, are a *résumé* of his doctrines generally. This critical interpretation of man's graven dialect in the monuments of the past is a philosophy of architecture, and within its compass a philosophy of history itself. To myself, a simple searcher after the beautiful, with vague notions of art, it came as the revelation of æsthetic truth. I believe it to be the book of all books for obtaining a wide outlook over the world of man's handiwork—over that combination of the arts which gives architecture vitality and voice. This treasury of facts and ideas, of axioms and apophthegms, is an authoritative code of arts, of laws bearing on their kinship and interdependence, upon what they are in themselves and in relation to each other. The depth and range of his acquirements are not less conspicuous than is his aversion to dogmatism and exclusiveness. Bringing the analytical method to bear upon his investigations, he verifies his conclusions by synthesis. He resolves the work under review into its essential elements, tracing the latter back to native instincts and gifts. He shows how these elements are severally combined by the Greek, the Roman, and Mediæval builders, and how, by bringing principles into harmony with form, they have left us diversified types of the everlastingly true and beautiful. To the neglect of these fundamental principles he ascribes those hybrid productions of modern times, Neo-Greek, Neo-Roman, Neo-Gothic, which defy classification—"A medley of styles, fashions, epochs, and means of construction."

#### *MM. Morel's Volume of Reproductions.*

At an influential meeting in Paris, held after the close of the exhibition of his works at the Musée de Cluny, it was resolved to reproduce by the best technical methods a selection from his drawings, representative of his range and manner generally, including many examples of detail in relief, section, or profile, as they flowed from his hand for execution by his school of artists and craftsmen. A sum of several thousand pounds was at once subscribed, and a committee formed for carrying out the project in a way worthy of *le grand patriote et le grand artiste*. The resulting portfolio of *compositions et dessins* just given to the world is at once a monument of his creative versatility, and the fittest memorial of an architect ever raised by his *confrères* and friends. In these facsimiles the accent of the master is never missing, in his unerring firmness of touch and fine sense of form, in the calm dignity of his statuary, and in the life and vigour of his

ornamentation generally. In his constructive and decorative designs we discern unity amidst plurality, combinations of the grand and the simple that result in a style of distinction with lucidity, so that he who runs may read the *raison d'être* of every detail.

#### *Designs for Art Workmanship.*

Whatever the scale or subject may be, whether designing a reliquary to be worked by goldsmith or silversmith, or planning a vast cathedral front, with its eloquent chapter of sculptured harmonies, like that of Clermont-Ferrand, we everywhere perceive the impress of a master-hand.

His figure-subjects and carved work generally,

Cornice or frieze with bossy sculptures graven,

as well as his wall-paintings, are essentially monumental and decorative in the true sense—*en rapport* with their surroundings, from which they cannot be detached, even in drawings, without our losing something of their full effect.

Who has not loitered to observe his happy and often grotesque renderings of animated nature in beasts of the field and fowls of the air that catch the eye of the passer-by from every coign of vantage outside the cathedrals of Rheims and Paris, not to mention endless other examples of his humour in this vein to be met with here and there throughout France? Whether wrought in stone, wood, or iron, they exhibit a singular mastery of animal configuration and gesture, with a facile fertility of production that never repeats itself. Thousands of these, replacing originals long lost, are re-creations rather than reproductions. Very notable, too, are his adaptations of the plant growth, displayed in a very world of bud, leaf, flower, and fruit, with a subtlety of curved line and dash of manner that always charm the spectator. "Joy's soul lies in the doing" of such work.

The revival of the higher art of the coppersmith and leadbeater in connection with architecture is largely due to his plastic handling and teaching. As surpassing examples of the handiwork of the former, I may instance the statues grouped around the *flèche* of Notre Dame, and the figure of St. Michael crowning the chapel of Pierrefonds Castle; of the latter, the crestings, crockets, finials, &c., on the adjoining roofs. To this phase of his genius we owe his achievements in a sphere and period which Mr. Hamerton, in his interesting "History of Autun Cathedral," has named "the epoch of Viollet-le-Duc"—the sphere of architectural restoration.

#### *As a Restorer.*

Restoration is an impulse of our day to conserve the good bequeathed to us in every architecture, and to undo the misdoings that have degraded or obscured earlier and better work, paying due regard to later additions of exceptional worth. It is to give a building, whose constitution has suffered from age or injury a renewal of life, by treatment adapted to its peculiar temperament. Viollet-le-Duc's grasp on the past, the logical bent of his mind in the observance of principles, his wealth of ideas and ability to give them shape, have made him *facile princeps* of Continental restorers. His ideal restoration of the Baths of Caracalla is as vivid as that of the Château de Coucy on paper, or of Pierrefonds, in fact. A lover of unity amidst infinite variety, the marvels of the Middle Ages were to him well-ordered organic wholes—the embodied ideals of their framers or of successors inheriting their instincts—and not as they have too often become at the hands of latter-day meddlers, a *mélange*. Order, Heaven's first law, was theirs and his. They solved their problems in stone by mathematics, and enriched their constructions with shapes and suggestions gathered from living nature in field and forest around.

#### *His Buildings.*

Having given, however imperfectly, some notion of Viollet-le-Duc's spirit and method, but short space is left for me to ask you to accompany me in thought to a few of the more famous buildings upon which he has lastingly set the sign manual of his art. Monsieur Baudot, an accomplished disciple of his master, and now Inspector-General of Historical Monuments, has, through a friend, honoured me with a note in point well deserving, I think, of being read to you. He writes:—

"Viollet-le-Duc began in 1869 the interesting work of completing the cathedral of Clermont, *i.e.*, two bays of the nave similar to those already existing, also the two towers, and the principal façade. For the façade and these towers he had no other data to work upon except substructions, the cathedral having never been finished at this point. There were, in fact, only foundations, and he had to conceive a design, that is to say, to create the work in question. Availing himself of the experience of the Mediæval masters, without tentative effort he created at a stroke that grand composition—façade and towers; and I do not think there exist in the Mediæval period towers or spires of finer outline, or more skilfully planned in point of construction. It will be understood that this work, like the rest of the cathedral, is executed in the style of the close of the thirteenth century. Nevertheless, in the ornamentation and in the outlines we find a character of simplicity which belongs especially to Viollet-le-Duc, who did not copy; but interpreted the Middle Ages by drawing his inspiration from



nature as regards the flora, fauna, and statuary. In the execution itself Viollet-le-Duc conducted only a part, and when he relinquished his post as diocesan architect in 1874, the work was carried up only as far as the top of the nave. At this time I was commissioned to complete it, and consequently to supply part of the details of execution, but I did my best to interpret as completely as possible the master-thought which had designed the whole, and had supplied details of every kind for the greater part of the work, the honour of which belongs entirely to him."

The church of the Benedictine Abbey of Vézelay is the most imposing remnant left of that great school of Cluny which had so marked an influence in Burgundy, and, as we learn from Viollet-le-Duc, over Christendom at large. In 1839 it presented, from long and general neglect, an aspect so forlorn and threatening that it became a question with the authorities whether its fate should not be settled by a *coup de grâce*. The loosened masonry of its Romanesque vaulting, that for six hundred years and more had spanned the nave with a grandeur hardly to be seen elsewhere, rested on toppling walls ready to fall at the first stroke of the hammer. Mérimée, then Inspector-General of Historical Monuments, was one of the first to recognise the practical genius of Viollet-le-Duc, at that time an untried architect of five-and-twenty, and to him he entrusted the important task of its preservation. It was the starting point of his career as a conservator of things of the past. He was wont to speak of it as his *premier amour*. The fruit of that first love is a finished edifice as strong as when built by Clunisian masons in the twelfth century. Left to the tender mercies of those doers of nothing, who are opposed to all restoration, this ancestral monument, seen again to-day in all its perfected strength and severe beauty, would have become ere this a huddled mass of ruins, *rerum confusa sine ordine moles*.

Shortly before his labours at Vézelay he was engaged, under Lassus, in resetting that architectural gem of purest ray serene, the Sainte-Chapelle of St. Louis.

"Many-towered" Carcassonne is an ancient and mighty stronghold of Languedoc, which every tourist in the Pyrenees who loves the past should step out of his way to see. It is in all ways the most perfect example remaining of the systems of military defence that prevailed in Europe from the eleventh to the fourteenth century. Within the citadel may be seen the various implements of war used through the ages swayed by the baron and the monk, which have been restored or constructed by Viollet-le-Duc, whose genius as a military engineer has been fully recognised by authorities on both sides of the Channel. With its restored belongings, it is much in the same state as when, "in 1356, this fortress effectually resisted the Black Prince, who burned the suburb below and ravaged with fire and sword the whole of Languedoc."

The Romanesque church of St. Nazaire, with the ramparts, is well called by Murray a perfect gem of architecture, and unlike anything in France. Less than thirty years ago it was all but a pile of ruins. The vaulting had fallen in; the walls were cleft and rent; the stained glass, in brilliancy and glow of colour equalling that of Chartres, was broken and detached. Here again his reshaping hand has

Softened down the hoar austerity  
Of rugged desolation, and fill'd up,  
As 't were anew, the gaps of centuries.

The Château de Pierrefonds, with its encircling towers, donjon-keep, and chapel dismantled and in great part destroyed at the beginning of the seventeenth century, has risen again with not less outward strength and inward splendour than when it dominated the Forest of Compiègne in feudal times. This baronial palace and fortress in its renovated state is a series of deductions in stone by the Cuvier of architects, who re-clothes the disarrayed structures of bygone ages with the vesture of his art. Sections of mouldings and other fragments rescued from the carefully-sifted débris are here and there replaced *in situ*, and give the key, as it were, to neighbouring details. In this restored page of the historical arts of France we find a pervading unity—a concord that comes of the sense of fitness where all things are in keeping—an *ensemble* which earlier schools possessed, but which in the chaos of our modern means and materials we have to a great extent lost.

It would seem that when a building has gone to the bad some of our notabilities in the republic of art would leave it as a dwelling for rats and carrion birds. From its relevancy to this part of my subject, I will presume to call their attention for a moment to what Frederick Schlegel says of the Abbey Church of St. Denis, when he beheld it in 1804 as wrecked by the Revolutionists:—

"The deep silent melancholy it inspires becomes stronger and more profound in approaching this ancient and now ruined cathedral. Every part that could be destroyed without too much labour and difficulty has been thrown down; the naked walls alone are left standing with the massy pillars and the arches that rest upon them. As the doors were opened a host of jackdaws and rooks, the sole inhabitants of the desecrated sanctuary, took flight, and when the dust they raised had subsided, we saw the upturned graves of the sovereigns of France, each of which the verger carefully pointed out."

To the critic whose own mood of mind is the measure of excellence in art, St. Denis may be a "whited sepulchre"; but posterity will have cause to thank Viollet-le-Duc and his band of skilled artificers for the renewed completeness throughout of that noble fabric, for the restored tombs and effigies of a long line of kings, not so very long ago lying mutilated and scattered over France. "Look on this picture, and on this"—contrast St. Denis as ravaged by the iconoclast, with the Church of the Patron Saint as we see it to-day, and who but lovers of decay and *débris* will doubt the lasting good done by men working in the spirit, and following the methods of the old builders?

The learned German critic also describes the condition of Notre Dame at the same date, as follows:—"During the first Revolution the front was injured in various ways, the exterior being despoiled of its decorations, and the statues torn down and destroyed. Worse than all this is the injury which the interior has sustained by absolute mutilation. The clustered pillars supporting the roof have been filled in, rounded and modernised as much as possible, so as to give them the appearance of solid circular columns. The effect thus produced is completely inconsistent with the plan of the exterior. . . . An intolerable spirit of persecution in the arts was often seen united with that inclination to imitate the false antique, which seemed epidemic in the eighteenth century."

Certainly man's rage outside, and the flaunting spirit of the Renaissance within, had done much to damage the aspect of the Church of Our Lady at Paris. The removal of the worst of the incongruities of later times, the pomps of Louis Quatorze and the vanities of Louis Quinze; and the added embellishments of Viollet-le-Duc, have brought about the harmonious change most of you have seen.

His works there culminate in that embodied conception of a tradition and aspiration, the new central spire or *flèche*, a masterpiece of scientific framing in oak within, and an artistic thing of beauty pointing heavenwards without. At its base stands the statue of the great architect, not "in his habit as he lived," like the one just erected on the front of the Hôtel de Ville, but in the fitting costume of a Mediæval master-mason. It is of hammered copper, wrought by his metal-workers, and placed there as an enduring mark of their homage and profound respect. The art of the modeller and the science of the geometrician, are also blended with happiest effect in the new baptismal font of bronze. So fine and bold are the figured reliefs of saint and symbol in this superb casting, that it is only by examination of the working drawings we notice how the freedom of the one in sweep and emphasis of modulated line is regulated by the applied laws of the other. Here, as in his works elsewhere, the artist and the man of science stand side by side. This duality is the note of his individualism, and the mental groundwork of his strength in the realm of imagination and in the world of fact.

And now, as the passing minutes warn me I have claimed more than my share of your kind attention, I will add my concluding word. None know better than yourselves, gentlemen, that a new architecture is the product of the combined effort of at least several generations; never the creation of one man. Viollet-le-Duc was not the maker of a new style; he did not attempt the impossible; but he has laid down with all the weight of his logic lines of direction for the path of the future. We must proceed, he insists, not by imitation of forms, but by deduction of principles, aided in their application by all the lights modern science can bestow, if we are to possess a constructive art worthily expressive of our age and civilisation. M. Baudot maintains, with the ardour of a follower, that this programme can be best fulfilled by a serious study of the "thinker and worker," whom he designates, "le chef de l'École de l'avenir."

The scientific or other specialist may here and there find something open to objection, but, taking the illustrious Frenchman all round, as a theoretical and practical architect; as an art-historian bringing the light of the past to illuminate the present; as a matchless teacher, in the workshop and in the studio, of arts which are the sisters, and crafts which are the handmaids, of architecture, he stands foremost as "l'homme du siècle"—the man of the nineteenth century.

#### Discussion.

Mr. AITCHISON said that no one in the room could feel more than himself, unless it were the gentleman who had just spoken, the excellence of this great Frenchman. All must have felt M. Viollet-le-Duc to have been one of those extraordinary men who appear at rare intervals in the world. From the time of Vitruvius no man had written a treatise on architecture which had thrown so much light on the history of architecture, combined with so profound a knowledge of art and constructive architecture as M. Viollet-le-Duc. The whole work, whether considered historically or as expositive of those arts which have passed away, must impress us as a combination of all the three things which go to form architecture. He had pointed out to them how the Mediævalist executed his work, and how this wonderful style grew up from debased Roman, gradually came to a point of excellence, and then suddenly expired. He had thrown a light on ancient work and that of the old Romans, and Monsieur de Choisy, his pupil, had written, from the inspiration of the master, one of the



most profound works of interest ever written, and which had taught them methods of construction they were before almost entirely ignorant of.

M. LEUCHARS then addressed the meeting, speaking in his native language, although well acquainted with the English tongue. He observed that he should carry away with him a pleasing remembrance of his journey to London. He was, as a Frenchman, profoundly touched at seeing the Royal Institute of British Architects in that special session paying the most solemn honours to the memory of a Frenchman, whose skill as an architect had been subject of dispute here and in France. He must, however, be a master who provokes dispute. M. Leuchars concluded his remarks by thanking the Institute for the high honour they had paid to one who was not their countryman. He begged to thank them as an architect, a devoted architect, and above all, as a Frenchman.

Professor KERR said it seemed to him that the papers taken as a group had lifted up their minds more than anything he had ever heard in that room. Differences of opinion sank into nothingness before such eulogiums as had been delivered in each case by the eloquent speakers and writers who had taken for subjects their very distinguished friends, and their equally, he did not say more than equally, distinguished colleague, M. Viollet-le-Duc. When at work at the table or in the office they felt themselves humble men of business, with many difficulties to contend with and humiliations to assail them; but when they came to the meeting-room and heard such addresses, they shut out all the vulgar world of business and rose to an empire of high art, which, laugh at it as Philistines might, was one to which they could ascend and shut out the world of business. He had listened to the eloquent periods of Mr. Hope, and to their friend Mr. Aitchison, so humorous and so amiable in every way. While Mr. Hope exalted the character of their friend Mr. Street, Mr. Aitchison engaged them with their fascinating and felicitous friend Mr. Burges; and Mr. Wethered, an enthusiast, seemed to lead them above all into the very highest ground of art. It seemed almost profanation to criticise the papers except as in the way he had humbly done—rather let them say they were above criticism. Let them learn a lesson from that night, and, regardless of Philistinism, do themselves justice in their own great work.

Professor KERR called attention to the presence of the Lord Provost of Aberdeen, architect.

The LORD PROVOST said he should enjoy being a regular attendant at the Institute. He looked back with pleasure to some five years spent in London in his early youth. He was really proud of the two offices in which he spent that time. He looked back with pride on Professor Donaldson and his kindness to him when he came to London as a mere clerk, without ability or interest, and who had taken him in and kept him in his office till he found work. He had seen him once or twice since, and the Professor had visited him in Scotland, not forgetting the poor clerk he had befriended. In the second office he sat next Street, in Sir G. Scott's office. He believed he had been selected for the great office he held in his northern city for carrying out the Improvement Bill they had obtained. He was doing his best to carry it out, and he hoped during his three years of office to do something in Aberdeen that would leave its mark behind it.

Mr. R. PHENE SPIERS proposed a vote of thanks to the authors of the papers, and this was seconded by Mr. J. P. SEDDON.

The CHAIRMAN said it had been one of the most charming evenings they had had for years, three of the most vigorous and powerful workmen of the century having been the subjects of the evening. The vote of thanks was then carried by acclamation.

Professor KERR proposed the adoption of a resolution conveying the congratulations of the Institute to Professor Donaldson, on occasion of the fiftieth anniversary of the Society.

The CHAIRMAN said they all knew what a kindly and friendly man Professor Donaldson had been to all who ever came in contact with him. Forty years ago he went to Professor Donaldson and asked him for introductions to Italy and Germany, and received letters from him, which were most useful to him, and one to Bianchi, the architect of the King of Naples. Mr. Horace Jones and Mr. Hayter Lewis were introduced to him by Bianchi, and they became fellow-travellers for some time. The resolution was unanimously adopted, and the proceedings for the evening terminated.

#### THURSDAY, MAY 8.

Thursday was devoted mainly to visiting buildings. The first was the new Oratory at Brompton, which was designed by Mr. Gribble, and the merits of the building were recognised by all. The second was the new Technical College, which will be better seen hereafter, when it is appropriated to its uses. Stafford House was considered to be more remarkable for the pictures than for its style or details. The third building was the fine house belonging to Mr. Hodgson, the banker, in South Audley Street. It was originally designed by the late F. P. Cockerell, and completed by Mr. Aitchison, A.R.A. Externally it is remarkable for the terracotta frieze by Mr. Boehm, R.A., which is carried across the front. The interior is finished with exquisite taste. The

details of the plaster-work and woodwork are equal to the best of what is done in Paris. Sir Frederick Leighton's frieze, *The Dance*, was painted for the drawing-room. The house contains some of the most costly objects that were in the Hamilton Palace sale, and the whole of the furniture is beautiful. In the dining-room is a valuable collection of engravings and etchings. The visit to this house gave most pleasure, although there was much which was attractive in Sir Wilfrid Lawson's and Lord Leconfield's. At the latter there is a splendid chimney-piece and overmantel, designed by Mr. Aitchison, which might be called a symphony in black and white, and a most effective frieze by Mr. Britten, which is composed of cupids gambling at the sea shore. In the evening there was a conversazione at South Kensington.

#### SCHOOL BUILDINGS.

**South Shields.**—The works in connection with the erection of a public day school for boys are to be at once proceeded with from the designs and under the superintendence of Messrs. Oliver & Leeson, architects, of Newcastle. The contract has been let to Messrs. Hirst & Sons, of Sunderland. The plans show accommodation for about 250 boys. The teaching will be entirely conducted in class-rooms with movable glass divisions, and there will be special rooms for chemical classes and other purposes. Children who may come from a distance will have facilities afforded them of dining on the premises. Accommodation is also provided for a resident caretaker.

**Henley-in-Arden.**—The Wootton Wawen School Board have just completed new schools at this place, which contains the greater portion of the population of their district. In the course of his speech at the opening of the schools, the chairman of the Board made the following remarks: "The school buildings, including the walling and draining of playgrounds, have cost the sum of 2,023*l.*, the number of school places provided being 283; the cost therefore per head amounts to 7*l.* 3*s.*; thus, whether we consider the above figures in comparison with the cost of other schools which have been built in the vicinity (Stratford-on-Avon for instance, which, exclusive of the site and other expenses, cost 10*l.* 10*s.* per head), or with regard to the average cost of Board Schools throughout the country, I think the Board may be congratulated on providing schools of such an admirable character at so moderate a cost." The buildings are chiefly of red brick, the roofs being covered with Broseley tiles; the floors throughout are laid with oak blocks, cut from the old timbers of buildings formerly on the site; the roofs are also partly of oak from the same source. The schools are from designs by Mr. W. Hawley Lloyd, of 79 Colmore Row, Birmingham, and are very carefully planned with reference to the aspect and peculiarities of the site; the buildings consist of a principal school room for boys and girls which is 51 feet by 20, and 16 feet 6 inches high. This is placed parallel with the main road; at its southern end are two class-rooms 18 feet by 17 feet, capable of being thrown into one, and also the boys' porch and lavatories, &c. At the northern end is a single class-room and the girls' and infants' porch, cloak room, &c., and an entrance for the public when the room is used for meetings. Behind the main block, and at the northern end is the infants' school, 36 feet by 20, and 18 feet high, and with a bay 17 feet by 6 feet, in which is the larger gallery. There are no corridors, but the entrance porches are so arranged that the boys, girls, and infants can pass from either room direct to their respective playgrounds or to the road. The rooms are admirably lighted and ventilated throughout, and are warmed by means of Mr. D. O. Boyd's ventilating school grates. Mr. F. J. Briley, of Coventry Road, Birmingham, is the contractor.

#### GENERAL.

**The New Archæological Museum**, at Cambridge, was opened on Monday. It was erected from designs by Mr. Basil Champneys.

**Mr. W. Flinders Petrie** has identified the site of the Necropolis of San in Egypt, with a chapel or shrine of Ptolemaic date.

**An Architects' Association** is proposed to be formed in Dundee. A provisional committee has been appointed, consisting of Messrs. Aitken, Blackadder, Ireland, Mackison, J. M'Laren, Keith, Ower, and T. M. Robertson, Mr. J. M'Laren, convener, and Mr. C. Ower, hon. secretary. The same committee have also to report on the rules and regulations for management of works proposed by the building trades of Dundee and vicinity.

**Messrs. C. Isler & Co.** are now fixing an 8-inch Artesian Bored Tube Well at Messrs. Brooks, Shoobridge & Co.'s Cement Works, Grays.

**Messrs. Charles Williams & Co.** were the sub-contractors for the whole of the constructional ironwork in Mr. Whiteley's premises in Queen's Road, Bayswater, with the exception of the warehouse next the baths.

**Messrs. Debenham, Tewson & Co.** have sold a building site at the south-west corner of Eastcheap and St. Mary-at-Hill, containing 1,755 square feet, on a building lease, at 1,220*l.* a year rent, or about 14*s.* per square foot.



# The Architect.

## THE ATTITUDE OF THE ASSOCIATES OF THE INSTITUTE OF ARCHITECTS.



NOT a few amongst the profession throughout the country—to say nothing of the senior members of the Institute especially—must have experienced a feeling of some astonishment on receiving intelligence of the meeting of Associates, which was rather mysteriously included in the programme of the Conference of Architects last week, and which resulted in a declaration of rights of so definite and uncompromising a kind as to be revolutionary. The assembly hall at Conduit Street was crowded with the young gentlemen; some of them, by the way, were not so young either; and, although we might truly report that the greatest enthusiasm was manifested throughout the proceedings, it is perhaps more in accordance with the fact to say that a spirit of quiet businesslike resolution prevailed, such as is always to be identified with the existence of what is called a good cause, and one that is likely to win. Perhaps it may have to be admitted that some of the speakers manifested a little inclination to exaggerate the facts; but this goes for nothing, for older and more experienced men exaggerate none the less; indeed, it is shrewdly suggested by observant persons that a certain amount of exaggeration is indispensable in these hasty times, if reformers would get a hearing at all. It is enough to understand, as everybody must now do very plainly, that there are grievances in this case which are of a perfectly practical character, and which those who suffer under them are disposed to insist upon being redressed. The only odd thing is the matter has been so strangely kept secret; for probably very few indeed of the Fellows of the Institute knew even that the Associates as a body were dissatisfied or displeased.

The gravamen of the complaint resolves itself after the usual British manner into the hardship of being denied the privilege of voting. It is not that the individual Briton in such cases is found always to vote with avidity in practice; on the contrary, he may vote so seldom as to make it almost never; sometimes, so far as he is personally concerned, he may have a positive dislike to voting, and may not care to conceal his sentiments; but, all this and a great deal more notwithstanding, the collective Briton, if you do not let him vote, must sooner or later know the reason why. So the junior class of the Institute members want to know why it is that they have not voting privileges of some kind or other; and, if they do not seem to care so very much what form these are to take, this is only the more significant, indicating, perhaps, the more strongly a general sense of discontent, based upon an arbitrary, unfair, and unnecessary exclusion from the usual rights of fraternity, which is sure to beget mischief.

As might be expected, when formulated for discussion, the demands of the Associates extend over wide ground. The Institute of Architects, it is declared, "should become more generally representative of the profession." This is a large question, and one that is exercising the minds at the present moment of many others besides the Associates, both inside and outside the Society. It is in fact a question, not so much of the capabilities of the members at the head of affairs, as of the very constitution of the corporation in view of the changed conditions of the profession itself. The advancement of architecture in a practical sense is a very different thing now from what it was fifty years ago when the Institute was founded; and it is not too much to say, therefore, that the whole of the machinery by means of which that object is to be accomplished may very likely be thought by many to stand in need of radical revision. At the same time all prudent and experienced men of affairs hold it for a maxim in such cases that reform ought not to go too far or too fast. The thoroughly English constitutional principle that an administrative system must "grow up," or, in the language of science, be evolved or developed out of the surrounding circumstances, cannot be too strongly insisted upon.

When the Associates of the Institute bring down their claims to the practical level of the assertion of a right to vote in the affairs of the Society, their leading argument is the very common one that, as contributors to the funds, they ought to have a voice in their disposal. The weight of this logic is vastly augmented when the fact is pointed out that the total amount which they contribute does not fall very far short of half the annual revenue. That is to say, the number of the Associates is so considerably in excess of that of the Fellows (691 as compared with 409) that, at half the rate of subscription per head, their importance financially is as here indicated; and it is scarcely to be wondered at, therefore, that when the warning call issues from the chair that "Fellows only are to vote"—in a question, perhaps, which Associates have been warmly debating—it should grate harshly upon the ears of the excluded.

We do not profess to say that, in such a case as this, the exclusion of a junior majority of the members of an open guild from a share in the administration of the business can possibly be long maintained; the genius of the age seems to be dogmatically against such a thing. Nevertheless we are quite prepared to find many of the best friends of the cause which the Institute represents, and especially those who are more advanced in years and experience, so strongly opposed to the recognition of the principle, that they will regard it as subversive to the utmost of both the dignity and the efficiency of the Society. But the view we prefer to take of the matter is one which, at any rate, seems to involve less argumentation. Here is a large section of the members who come forward and ask why they are ignored in those divisions which may be said to be in a certain sense the life of the Society—for, indeed, where there are no differences of opinion there is not likely, as it happens in this world, to be much vitality anywhere. This large section of the members are able to say that they constitute even a large majority, possibly two to one, or even more, amongst those who habitually attend the meetings. They are also able to point to large figures representing their aggregate money contribution. They are none the less able to say that every one of them is by his acknowledged qualification not only a man of full age, but a man of good education, and of high intelligence. The only difference, in short, between a Fellow and an Associate is that the Associate is not a fully-established public practitioner. Perhaps he has not been quite seven years in practice; perhaps he is an assistant; perhaps he only combines in his business measuring-surveying with architecture. He may be a young architect in practice, like the son and successor of the late Mr. STREET; or a very mature man of quantities, like the son of the almost equally famous Mr. RICKMAN; or the high-class middle-aged permanent manager of an office, who is biding his time, or is not necessarily anxious about getting into independent business at all. That so many classes of members so well qualified, therefore, to take an interest in affairs, should be now combining to demand a reason for their total exclusion from all that gives effect to such interest, is undeniably a serious incident, and one that cannot be treated lightly by responsible authority.

It remains to be seen whether the Committee of Associates appointed to take action in the matter will address themselves to the Council or to the members in general meeting. If they desire to be attended to without "the law's delay," especially in view of the proximity of the vacation, they will take steps to have a special general meeting convened speedily on the written requisition of eight Fellows. On the other hand, if they are willing to act in an accommodating spirit, they may submit their case to the Council—taking care to secure a friend or two at court—and wait, with the provincial members, for the result of the revision of the constitution which it is understood is to be promoted within the Council itself, in response to the expression of general uneasiness which has lately been manifested in so many quarters. We will only venture to say further that, now the question has been fairly raised, and the gravity of the arguments plainly stated, as was certainly done at the meeting last week, there might be more risk involved in hasty proceedings than in patient deliberation. The promoters of the movement may permit themselves fully to understand that their *pronunciamiento* has created quite as great a sensation as they could wish. They may also rest assured that the reactionary element introduced into the Institute a few years ago is not likely now to be an impediment in their way. The radical mistake of this is becoming more



and more clear. It has worked out its own downfall: the principle of *excluding* everybody from the work of the guild must give place to that of *including* everybody. Exclusiveness, we now know by experiment, means inanition and decay; inclusiveness promises vitality, vigour, and prosperity.

## ARCHITECTURE AT THE ROYAL ACADEMY.—II.

THE smallness of the space devoted to architecture at the Royal Academy is, let us hope, the reason why not a few of the drawings which are accepted have been hung so high that it is really impossible to do justice to them. Several of the contributions which have been in this way placed out of reach will be unavoidably passed over in this notice, which we propose to limit, moreover, to what may be called the architecture of the year, as distinguished from miscellaneous work. The first drawing which we shall notice is a sketch of a new block of *Buildings in Brook Street* (1206) by Mr. ROBERT W. EDIS. This is literally a sketch, but it represents a large amount of building, Elizabethan in character, and with a profusion of bay windows. Two designs by Mr. GEORGE W. WARD (1213, 1214) are shown in small drawings. The more important one represents a street front of very heavy round-arched architecture, but otherwise not unpleasing. In *Hill Lands* (1215) we have a design from the pen of Mr. W. H. A. BERRY, which begins a somewhat extensive series of half-timbered houses, of which some, like this example, are comparatively plain, others ambitious. To this series belongs Mr. A. R. STENNING's house at *Foxwold* (1217), a design to which the air of an overgrown farmhouse, rather than a gentleman's residence, seems to have been given by the exclusive employment of very rustic features.

Mr. ERNEST C. LEE exhibits a proposed new *Church for Collier Row* (1218), in a black, unprepossessing drawing, unworthy of the merits of the building. A staircase turret, apparently for access to the upper part of a rood screen, is a feature in this design. The drawing of the *Presbyterian Church at Stoke Newington* (1223), exhibited by Mr. SULMAN, errs as much in slightness as Mr. LEE's does in over-blackness. The buildings form a very good, well-treated group, though we question the advantage of a small tower and a large one to the same building, unless they be much more decidedly contrasted than in this design is the case. *St. Swithin's Church, Lincoln* (1224), by Mr. JAMES FOWLER, has a very lofty west tower and spire; otherwise it is not of exceptional character. In the *Edinburgh University Extension Buildings* (1236) Mr. R. R. ANDERSON has had a fine opportunity, of which he has probably availed himself to the utmost; but this comparatively inadequate drawing fails clearly to show as much. A large block of buildings with round-headed windows and a very large campanile is the subject of the drawing, which unfortunately is comparatively slight in execution and badly hung. *Pickhurst, Surrey* (1238), by Mr. J. M. BRYDON, is an ambitious pen-and-ink drawing, showing a very large house, of which some of the features are exaggerated and bizarre in design, as, for example, the singular roof to the central tower. Near this hangs a drawing of another large *House to be built at Wimbledon*, by Mr. E. C. H. BLAKE (1244). There is a singular absence of balance or composition in this design, taken as a whole, though the disconnected parts are some of them noteworthy.

Mr. J. J. STEVENSON exhibits the *Tower of Free St. Leonard's Church, Perth* (1245), a massive square tower, a good deal pierced by openings, and surmounted by a crown of four flying buttresses, like the well-known Edinburgh original. There is a dignity about this tower which is worthy of the architect's reputation. Near this hangs a contribution by Mr. A. W. BLOMFIELD, *The Interior of the Gallery, Denton Manor* (1247), a long and magnificent apartment, with the usual features of the Elizabethan gallery, such as an enriched ceiling, panelled walls, a lofty chimney-piece, and mullioned windows, all worked into a good and happily accidented composition. Of the same general character is the interior of the *Hall of Ingestre Hall* (1248), now being restored by Mr. BIRCH, who exhibits an exterior of the same building (1297). The ceiling of the old example is, however, really less artistic and rich than Mr. BLOMFIELD's, though, generally speaking, the old hall seems to be an excellent building; and, if it is to be touched at all, we are glad that the restoration should be in the hands of Mr. BIRCH rather than in those of

some one less well informed on the subject of old English domestic work.

Mr. T. E. COLLCUTT's *House at Sheen Common* (1249) is shown in a beautiful drawing. The design is full of breadth, repose, and vigour, and yet is refined. The buildings are half-timbered, and but one gable is introduced into the view.

Mr. WILLIAM YOUNG shows a proposed *New Façade and other Additions to Easton Lodge* (1251), in a not altogether happy drawing, where the front of the intended building looks the spectator full in the face. The style is Elizabethan, and the buildings are extensive. Above his drawing hangs a very dark one by PUGIN & PUGIN, representing additions to the *Old Palace, Mayfield* (1252). It is a pity that historical houses like this should be added to at all, but as far as we can decipher this drawing, the new work seems well designed, and quite in keeping with the old.

Mr. G. SHERRIN exhibits *A Row of Workmen's Cottages at Halstead* (1253), designed with some taste and care, and Mr. MAURICE B. ADAMS follows him with an extremely well-executed bird's-eye view of a country house near Lydney (1256). This drawing shows more of the roofs than of the features of the building, and yet a satisfactory effect is secured. Near this hangs a drawing of a church to be erected at Seascale (1259), by Mr. C. J. FERGUSON. This church is most suitable for the extremely picturesque locality where it is to stand. The principal features are simply a west tower, nave and aisles, and a low transept, but each is well designed; the grouping is studied and careful, and, in addition, the drawing is very well executed. *The Merridams* (1261), contributed by Mr. M. J. LANSDALL, is another of the half-timbered dwelling-houses exhibited, and is better than the average of them. Mr. JAMES BROOKS exhibits the *Church of St. Michael, Coppenhall, Crewe* (1263), in a design which is marked by most of the characteristics of his work. Lofty proportions, distinct and simple parts, and an air of dignity mark this church, which has a large transept and a small lantern at the crux, but, in addition, possesses a west tower, good in itself, but, in our judgment, not lofty enough for the church to which it belongs. The east end and the gable of the transept are both shown in this drawing, and are admirable compositions. A taking drawing illustrates an entrance porch and staircase at Campden Hill (1264), which Mr. E. H. BOURCHIER exhibits. These are evidently additions to a dwelling-house; the general idea is rather French, but the detail is Tudor, and perhaps too florid. The forms employed are unusual, and not all of them pleasing, but the management is clever, and the general effect is undeniably successful.

Another good drawing represents *Gilcruce* (1266), a fairly successful half-timbered house, of which Mr. J. F. DOYLE is the architect, which is followed by a subject of more importance, though less well shown—*The Church of Our Lady and St. Denis. St. Mary Church* (1268), exhibited by Messrs. HANSON & SONS. This is an interior view of a church of considerable size and richness, rather Belgian in character. Another church design is contributed by Mr. A. W. CROOK, in the shape of a well-drawn geometrical side elevation of the proposed *St. Philip's Church, Southport* (1270), of simple lancet architecture, well handled.

Mr. ERNEST GEORGE in *The Knoll, Barton* (1271) equals the execution of his Collingham Gardens drawing, which we mentioned in our first notice; the subject of this drawing is less extensive, but it is equally inspired with a perfect sympathy for ancient domestic architecture, and the same method of execution, in warm sepia, is employed.

*High Close, Hampstead* (1276), is another of the half-timbered designs for dwelling-houses which we have alluded to as numerous in this exhibition; and on the whole this example displays more composition and less trusting to chance combinations for effect, than the majority. After this come two or three unfortunately hung contributions, which we regret not to notice in detail; and we then reach a dashing drawing of *Residential Flats* (1281), exhibited by Messrs. ROMAINE-WALKER & TANNER. Neither the somewhat careless draughtsmanship, nor the very wide license in the use of debased Classic detail correspond well with the quality of the chancel of St. Saviour's Church, to which we drew attention in our last notice, and which bore the name of Mr. ROMAINE-WALKER alone. This drawing represents a large and showy block of domestic buildings, marked by combinations of features that are more startling than orthodox, and as to the success of



which, if the design be carried out, we cannot but entertain doubts. Much in the same *bizarre* architecture as the last are two small contributions by Mr. E. J. MAY, representing a group of stabling (1285), and part of a Bedford Park house (1284). These trifles are, however, undeniably picturesque and pleasing, and far more carefully designed than is usual with their author, who does not possess all the skill of Mr. ADAMS, whom we meet again with what he modestly terms a cottage at Windsor (1290), though it appears to be a good-sized, well-studied Queen Anne house, with a high-pitch main roof.

Mr. KEMPSON exhibits an exterior view of a good Early English church at Hereford (1294), with a tower a trifle less severe in treatment than the rest of the building. Another church, with a tower in effect detached, is the *Henry Wilson Memorial Church, Sheffield* (1300), exhibited by Mr. J. D. WEBSTER; this building is, however, of Perpendicular character. We return to domestic work with Mr. ASTON WEBB's richly-treated design for Bedford County Club, remarkable for the mass of windows occupying the front, which is followed by the commonplace, though ambitious, front of a house in South Audley Street (1298), shown in a large drawing by CRICKMAY & SON. Mr. F. H. OLDHAM sends a *Manchester Warehouse* (1301) of rather Gothic character, and Mr. ARTHUR CAWSTON a florid, but not very harmonious interior, showing the *salon* at Paddockhurst (1304), a kind of Elizabethan gallery, with some very doubtful details. Mr. A. R. STENNING follows with one of the best of the half-timbered series of houses built at Foxwold (1305). Even here, however, where much skill is shown, an oblique gable is introduced apparently out of pure wilfulness, and without any adequate reason or inducement. *Colwood, near Cuckfield* (1303), exhibited by Mr. H. RICARDO, is another large house of the same class, and more sober than most of those exhibited.

Mr. ROBSON sends a drawing of the interior of his *Prince's Hall, Piccadilly* (1309), but the drawing does not seem to us a successful one, and the Fates have not been propitious to it in the matter of position. Mr. SHERRIN's picturesque, well-balanced house at Ingatestone (1310), and Mr. E. C. LEE's simple and dignified *East End of St. Thomas's, Brentwood* (1312), bring us to Mr. R. R. ANDERSON's *Central Station Hotel, Glasgow* (1313), a rather inadequate representation of one of the best buildings of our days. The details of this building are Early French Renaissance, and the general grouping is simple and successful even as shown in this view; but the very fine lines employed do not possess sufficient force to bring out the effects of the composition properly.

*St. Cuthbert's Church, South Kensington* (1315), exhibited by Mr. H. R. GOUGH, bears a good deal of resemblance to a collegiate chapel. It has the singular peculiarity of an east-end occupied by a group of niches with sculpture, arranged with a general resemblance to the design of an east window, and taking the place of such a feature. Near this hangs a drawing showing very carefully the elaborate reredos full of sculpture of the chapel of Auckland Castle (1319), by Mr. T. D. FOWLER, and an extremely rough black drawing of a new Scandinavian church for Liverpool (1320), by Mr. W. D. CARÖE. This church has a central octagon, with a high pyramidal roof and short transepts, and other additions growing out of this centre. No contrast can be stronger than between the roughness of this last exhibit and the very delicate draughtsmanship and overwrought detail of a proposed moorside church (1321), by Mr. H. W. BOOTH. This elegant piece of detail would be quite out of place, we fear, on a moorside, and seems hardly sturdy enough to resist wind and weather, even in a more sheltered position. The restoration of the chancel screen, of late and rich woodwork, of Neen Savage Church (1323) is shown in a careful drawing by Mr. P. GORDON, and near it hangs a modest but very creditable sketch by Mr. T. WARD, of an *Artist's Cottage* (1328). The chief peculiarity in the design of this cottage is that the whole of the upper floor—there are three storeys—is occupied by a studio.

The drawing of *Fremington House, North Devon* (1330), by Mr. ERNEST NEWTON, is a good representation of a large house of late Queen Anne architecture, with, however, a certain infusion of dignity, which makes some amends for the partiality for debased forms shown by the designer. Messrs. HOOKER & HENNING send a drawing of the front of No. 142 Fleet Street (1332), as satisfactorily rebuilt by them; and Mr. E. S. PRIOR exhibits a large and rather pleasing house

called *Manor Lodge, Harrow* (1333). The view exhibited is apparently a garden front, and there are some complexities about the levels which interfere a little with what is otherwise a successful design. Mr. GEORGE SHERRIN exhibits two more domestic works, *Writtle Wick, near Chelmsford* (1337), and the *Gatehouse, Ingatestone* (1346), both successful, and showing good management of the parts of the design. These are half-timbered work, and may be said worthily to close the long series of such buildings we have noticed.

Messrs. HUNT, STEWARD, and F. C. KNIGHT illustrate, by a fine drawing, *Stuart House, Cadogan Square* (1343), a design which strikes us as the best of the Queen Anne buildings exhibited in this year's Academy. The building is rich, but the whole is in good keeping, and the plain work is made to throw up the ornament. We shall conclude this notice with Mr. G. GILBERT SCOTT's fine interior view and plan of the new *Roman Catholic Church of St. John Baptist, Norwich* (1340), in course of erection. This church approaches a cathedral in importance and scale. The arcade has above it a regular triforium, surmounted by a clerestory, and crowned by a richly-vaulted roof. A plan is appended which shows that the scheme is one of great extent and completeness. The work generally, whether we look at the dignity of the whole, the richness of the mouldings, or the skilful introduction of ornament, is most creditable, and the building must prove a remarkable addition to the fine series of Roman Catholic churches which have been erected in various parts of Great Britain.

#### EXHIBITION NOTES.—THE GROSVENOR GALLERY.

THE distinctive position of the Grosvenor Gallery as an exhibition of art upon which the doors of the Royal Academy were closed, or, to give honour where honour is due, as an exhibition where certain eminent painters delighted to place their pictures within more congenial surroundings than the motley multitude at Burlington House—this position, as distinctive and the prerogative of a novel enterprise, seems likely to fall before the more liberal government of the Academy exhibition. Eccentricity is no longer confined to Bond Street, impressionism and realism, and even mediæval revivalism, are to be found in Piccadilly; while, on the other hand, Royal Academicians seem to think it no bad plan to place on view within the Grosvenor Gallery the surplus products of their year's work, or such examples as might be held a little off the orthodox line. Nevertheless, there are still a certain class of pictures and certain artists that must be looked for in the Grosvenor Gallery only, and the exhibition of the present season owes its importance to such cause, for Mr. BURNE JONES shows here in *King Cophetua and the Beggar-maid* the noblest and most mature result of his imaginative and artistic faculties, while the portraiture of Mr. W. B. RICHMOND, the decorative composition of Mr. ALBERT MOORE, the clever eccentricity of Mr. WHISTLER, and the poetic if mannered work of Mr. STANHOPE and his pupils, present phases removed from conventional or academic styles.

It has never been our practice in these columns to worship Mr. BURNE JONES for his eccentricities, while we have been forward to acknowledge in his work the fervour of a rich imagination, high aspiration, distinguished power of design, and fine sense of colour. Eccentricity is often a cloak for ignorance or the contorted bias of uncontrolled individualism; it is in proportion as he has arisen above such weakness that Mr. BURNE JONES has been able to make full use of his rare gifts, and in the large picture now before us we are glad to welcome his art in its healthiest and most ordered, as well as most beautiful, manifestation. Upon a golden throne, built up with cunning invention in steps and panelled sides and pilasters decorated with arabesque and design, sits the "Beggar-maid," fair, tender, and meek, wonderment in her grey eyes and pale face, humility in her attitude, sitting forward on the seat with arms straight down supporting herself, and feet pressed close together; a scanty grey gown clings to her form, and shows its lovely and refined contours. The knightly lover-king has placed himself on a lower step, and, holding his crown in his hands, he looks up at his beggar bride, uncrowned, and worshipping before the worth of purity and beauty. Above the throne two attendant girls lean and sing from one scroll over the balustrade of a



gallery, which is draped with splendid stuffs that mingle with their rich raiment. The long staff and banner-folds of a gonfalon are set aslant against the side of the throne to the right, together with the shield of the king. This bare outline of the composition, which is on little short of life scale, can give small idea of the dignity and splendour of the picture. The dead golden hue of the throne, the pale flesh tones and soft iron-grey in the gown of the maid, bring contrast and force to the variety and richness of the king's dress, which has the dark and lustrous harmonies of a wild bird's plumage, and to the intermingled hues of the other draperies. The knight is undoubtedly the artist's finest study of a male figure; the dark-haired head seen in profile is a type of poetic and masculine beauty; the limbs are strong and largely knit, and have none of the emasculate languor or attenuated effort once too apparent in the painter's male models. The lines of the composition are most careful, the angles and levels of the golden throne giving substance, while the figures balance on the principle of the pyramid, kept from too obvious intent by the slant line of the gonfalon. If one must name a school to which this noble work belongs, it might be traced as akin to Venice and Ferrara; it may be allowable to think of GIORGIONE and CARPACCIO and of MARZIALE, or of the stately compositions of TURA and the GRANDI. The *technique* is beautiful, solid and fluent, cunning and curious in the fusing of pigments. Almost the only point which mars the completeness of the work is, to our thinking, the line of the right leg of the beggar-maid, which follows and is seen just beyond the slant fall of the drapery over her knees. It is a soft, over-soft, curve, wanting the emphasis, however tender, of well-proportioned and well-developed limbs. Against the drapery of the artist it has often been urged that it is not rightly understood according to accepted standards, and this must be granted. A certain fantastic inventiveness induces the painter to break up the folds in restless variety, or to cut up the surface into quaint devices, with a view to decorative and shifting colour, rather than to follow and indicate the underlying form. Such treatment when applied to Classical or sacred designs is certainly misapplied; in the present instance the manner is not pushed so far, and is better suited to the legendary and picturesque character of the theme.

MR. BURNE JONES exhibits another picture of a purely decorative kind. *The Dryad* is a square composition, in which a female form, draped in green, the spirit of the tree, is set at its heart, the foliage spreading all around and from her. In this instance the figure is treated as more distinct from the leafage and stem than in a previous panel, where the limbs of the dryad passed fantastically into grey ribands and leaf-like draperies.

MR. ALBERT MOORE's idea of decorative art is somewhat individual and limited. So many examples of it have in no previous season been fairly set before the public, for his work is to be found in the Royal Water-Colour Society's exhibition, in the Grosvenor Gallery, and on unusual scale on the line at the Academy. In all these instances he has occupied himself with the same problem, with variations; namely, the juxtaposition of figured grey or silvery stuffs patterned in shadow colour against delicate tints of pale vermillion. In the Grosvenor picture we have one figure wrapped in the diapered stuff, and the ruddy tone introduced as accident here and there; in the Academy design more than one figure is used, and the couch on which they recline is covered with silk gauze of faint vermillion, while the egg-shell grey and turquoise wall behind is diapered in wave lines of shadow tint. We use the word design, but the meaning, as ordinarily understood, must here be modified. MR. ALBERT MOORE does design, and that with laborious pains, but he designs more and more in colour not form; the languid and rounded forms of women he uses as dummies for draperies, the end of which is a scheme of colour and quality of surface, not a study of rhythmic and ordered line. Very subtle is his sense of harmony, very skilful his management of diaper, yet we do not wholly go with him. His result is spotty and fretful, although it must be allowed scintillating and brilliant also. It would be difficult to place in fitting framework these experimental schemes so as to form part of a decorative whole, and yet they hardly tell alone. On the whole, while frankly admiring, we incline to think that the painter's latest efforts, however patient and cunning, are not his happiest from the decorative side.

The chief contribution of EVELYN PICKERING, illustrating a verse from TIBULLUS, we have already noticed in studio

comments. It tells very well in the gallery, the sonorous quality of the colour standing the test. MR. STRUDWICK's art, though cast on the same lines of the early Tuscan school, is less sincere. We have an uneasy feeling that he does not, like the lady artist, *think through* the early school, so that habit has become nature, and realities take the aspect of the mind's conception; but that he consciously imitates the antique mode, and thus is like one who, with mincing gait, walks in a costume of bygone date. Yet there is beauty of fancy in *A Story Book* and in the parable of *The Ten Virgins*, and some figures are graceful, with distinct style and expression. The colour is harmonious if rather muddy, the manner hard and laborious.

MR. STANHOPE's design on the oft-quoted Shakesperian verse, *Patience on a Monument smiling at Grief*, has notable rhythm of line and pathos of significant expression and attitude, albeit marred by some mistakes of taste. The impersonation of Patience sits on a marble seat beneath overhanging greenery, leaning sideways on one arm, and at her feet another female kneels, in crouching attitude, and clasping her head with both hands, with action finely expressive of grief. The face of the love-sick maid, with simple parted hair and delicate English features, is lighted by a faint smile, the open mouth drawn with much sweetness and delicacy. The lines of both figures are in happy *rapport*; the draperies, in pale isolated tints, are in good harmony; only the clumsy thickness and awkward pose of the limbs of the chief figure, swathed over with pink drapery, strikes one, and there is an ugly intrusion of a piece of muslin under-dress, which for no visible artistic reason puffs out from the waist, and makes a meaningless break of line.

MR. WHISTLER is nothing if not unlike his neighbours, and the full-length portrait of *Lady Archibald Campbell* is novel, at any rate this side of the English Channel. The lady is in walking-dress, a retreating figure who looks back at you over her shoulder, the face, the one light in the scheme of dusky greys and browns, cast upon a background of gloom. The thing is clever and not unpleasing. Whether it is meant literally for a "nocturne" we do not profess to know, but surmise it to be only an ingenious "arrangement" in night colours.

The portraiture of MR. W. B. RICHMOND is again at its best for the qualities that have ever been its best attributes—style, distinction, a certain elevation and poetic perception of character, and artistic as opposed to literal treatment. The separate portraits of the sisters, *Miss Dora* and *Miss Rose Mirless*, *May*, the daughter of MR. G. W. RAWLINSON, *Miss Florence Rasch*, and the portraits of *The Hon. Ronald Leslie*, and of *Viscount Cranbourne* have all the characteristic mark. For charm probably *Miss Rose Mirless* and *May* bear the bell; the first, a half-length, in olive-green gown, saffron kerchief thrown loosely round chest and throat, and green hat shading a face of noble and sweet dark beauty, stands against a stretch of open down and a sky blue with fleeting clouds, that for the moment hide the sun, and emphasise the figure in luminous shadow against the background. There is something fearless and frank in the character of the lady's beauty, which is singularly in *rapport* with the treatment. In execution it is facile and broad, too unelaborated to suit the taste of captious critics may be. The same handling is used in the sweet profile portrait of *May*, clad in yellow buff gown, touching the keys of a pianoforte against a golden-brown background. The inexpressible charm of pure girlish beauty is in this innocent profile lifted in response to the music the fingers make. In *Viscount Cranbourne* the difficult scarlet of regimentals is bravely treated, and the face individualised in manly reticence. There is no doubt about the breeding of MR. RICHMOND's sitters; he is distinctively the painter of the refined and cultured class. Perhaps he learnt the secret partly from his master, MR. WATTS, R.A., who sends two portraits of *Lord Salisbury* and *Earl Lytton*, two fancy pictures in curious, iridescent colouring; also an upright study of a rain-cloud discharging a passing shower upon green, pastoral land. MR. ALMA TADEMA's two bust portraits of *Herr Lowenstam*, the engraver, and *Signor Amendola*, the sculptor, each occupied with his craft, are memorable for vivid actuality and character, and the clever realism of detail.

MR. MILLAIS, R.A., has finished the portrait of *Lady Campbell*, which on Show Sunday was only blocked out; that is to say, he has worked it up to a certain point of coherence, and diapered the golden background with gay flowers. But the flesh-painting is in crude condition; the throat especially



is disagreeably inchoate. A quaint little portrait-piece of three children by Mr. ROOKE, the *Sons of Major Godman*, deserves note for its Flemish multiplicity of detail and laborious painting in mosaic-like colour and solidity. The small portrait of the late *Dante Rossetti*, by Mr. HOLMAN HUNT, a reminiscence of the painter-poet in pre-Raphaelite days, must also claim a word.

If we close our notes of pictures here it is from no disrespect to the varied attractions of a list from which we have not enumerated a tenth part. Many of the exhibitors, academic or otherwise, we meet in better cue at Burlington House, and some we have noted on our studio round.

It remains to speak of the sculpture. And here we must pass over a quantity of more or less interesting work in the way of busts, portrait or fancy, including the terra-cotta *Mater Dolorosa* of EVELYN PICKERING, which we noted in her studio, and some reliefs, and turn to the only work of much importance, the *Dryope fascinated by Apollo in the form of a Serpent*, a bronze life-size figure by R. BARRET BROWNING. The story of the model who stood to the artist for this statue, with the pet serpent twined about her body, has been sufficiently ventilated in the press for a while past, together with the sudden and tragic death of the serpent, "much lamented." The only worth of such gossip is to substantiate what indeed the internal evidence supplies, that Mr. BROWNING worked from the life, and that literally. The model is strong-limbed and coarse in contours, without soft allurements or the noble charm of classic grace, and the sculptor has in naught extenuated. He has, moreover, left his modelling in a state of vigorous but rough unfinish. The attitude is hardly chosen with fine feeling either; the girl turns towards the serpent with the torso and head bent a little backward, and guards her left breast with both hands. Here adverse comment must end. Once a certain coarseness allowed, and one has only praise left for the power of the figure, the skill with which from all points it tells, though especially from the angles. The upward lift of the right arm and the backward thrust of the left are finely brought into line with the sway of the figure and the coiling curves of the serpent. The savage type of head, too, with overhanging mane of short hair, is in keeping with the general treatment. Altogether here is a work of undeniable, if disagreeable, strength. That it should have applied vainly for entrance at the Academy doors is hardly creditable to that establishment. Even a purist has no right to say the statue offends against the standard of decency, although he might wish that a more ideal aspiration might govern the talent of a sculptor of so much power.

#### NOTES FROM PARIS.

A SHORT time only has elapsed since there was a sale of the artistic property of the late Louis Leloir. The pictures were few, for the painter was esteemed, and his works were often purchased long before they had been completed. This week there has been a sale of the contents of another *atelier*, and one of a different class. Louis Leloir worked in a studio that was a most delightful little museum. Benjamin Ulmann cared little for accessories, and his big room in the Rue Chaptal was almost severe in its simplicity. Poor Ulmann was hardly appreciated as well as he deserved. The pupil of Drolling and Picot retained a great deal of the old academic style, and he was among those who believed that the system which was once represented by David should never be allowed to become obsolete. Everything he did was the result of laws which were inspired by the great masters. His *Séance du 16 Juin, 1877*, which is always surrounded by a crowd in the present Salon, represents the scene in the Assembly when all the members with one voice declared M. Thiers to be the liberator of France. The subject was difficult, for what is to be made out of some hundreds of men dressed alike in black, and sitting on rows of benches? Ulmann, however, has contrived to make a picture that France should retain among the national property, while it is so admirably composed as to become a work of art. The writer of these notes was consulted by the artist while the picture was in progress as to the advisability of exhibiting it in England. Ulmann thought that there was enough sympathy with France to make the picture attractive, and that strangers might be more eager to patronise him. How hard he worked for fame is evident by a glance at the works which have found their

way to the Hôtel Drouot. There we see his *Cato in the Senate*, which Ulmann was so glad to have reproduced in *The Architect*, his impressive *Marguerite en Prison*, and in a different style *Les Gitanos de l'Albaycin*, *La Crécelle de Nuremberg*, and *Education Alsacienne*—pictures which ought long ago to have found purchasers. Then there are reductions of his fine work in the Luxembourg, *Sylla chez Marius*, of the plafond in the Cour de Cassation, of the *Justice* in the Conseil d'Etat, and of works in provincial buildings. Here we have excellent landscapes, and there studies for illustrations of Shakespeare's plays—a sea-piece or a view of a temple. Ulmann was among the winners of the Grand Prix; and even amidst the sordid surroundings of an auction-room there is enough to testify to the merits of the system of education of which that prize is the symbol.

It is satisfactory to read in the proceedings of the Conference of Architects in London that tribute was paid to the splendid reproductions of the drawings and sketches of Viollet-le-Duc, which are being published by MM. Morel, although it would have been better if the description of the work came from an architect rather than from a surgeon. How is it that in France there is sufficient love for architecture to enable a book of that kind to be published, while it is impossible in England to obtain a collection of designs by Burges or Street, by Cockerell or Elmes? The French publishers are insured against loss in their venture; but if a man were to propose the production of the works of an English architect to one of the houses in Paternoster Row, he would be considered to be a lunatic. It is not in marble alone that the French have the memorials of their great men; if one can by any means be made the subject of a book, that book is forthcoming regardless of cost.

If, as Sterne says, they manage those things better in France, there are others in which more wisdom is shown in England. Paris has lately been in the throes of a municipal election, and happily the proceedings have been as dull as the elections of English poor-law guardians. The candidates have been allowed to cover the walls of public buildings with red, blue, and yellow placards containing their appeals to the patriotism of the *quartiers*. The effect was horrible, and, what is more, the colours have in some cases been absorbed by the white stone, and it will take many a heavy shower to remove the stains. There is, unhappily, a growing tendency in Paris to stick advertisements in positions where their appearance is almost a sacrilege. The State gets something by the stamp which has to be affixed on the smallest written advertisement for a lost poodle or for a charwoman, and there is a price paid for the wall-space. Even in the Place de la Concorde one sees hideous bills on the piers of public offices, and they have been allowed to degrade the façade of the Palais des Beaux-Arts. Fancy the effect of big posters on Burlington House! When the occasion passes those things are allowed to remain, and the architectural student who pays a visit in the autumn holiday to the grand old church of St.-Germain des Prés will probably find half the porch obscured by the announcement of some concert or other that was held last winter. To a Frenchman the bills may be trifles of no account, but Englishmen who have made Paris their home are generally more Parisian than the Parisians, and are jealous of anything which affects the amenity of the most beautiful of cities.

It is reported that the fountain in the Health Exhibition at South Kensington required the exercise of much patience and ingenuity before it was made fit to act and to co-operate with the electric light in forming a picture for the visitors at night. The water companies might supply unlimited water, but it was of little use so long as the fountain continued in its old condition. The authorities of the exhibition would have acted wisely if they had sent to Paris for an expert. The art of constructing fountains that will please the eye is unknown in England. What would have become of Paris during the late torrid weather if the fountains had been seized with the weakness which is so common in London, and had ceased to play? The cessation would be almost enough to cause a revolution. The English system seems to be to make holes and let the water do as it likes, while the Frenchman makes the water subservient to his will. It must form graceful lines and observe the law of contrast. Accordingly in one part it is allowed to flow copiously, and in another part to issue in a stream that



may be almost as thin as a thread. No one was ever known to admire the so-called fountains of Trafalgar Square, but the Paris fountains are always a picture. Every one is arranged to produce a different effect, and the two near the Palais de l'Industrie form a contrast. If they were in Hyde Park the arrangements would be identical.

There is some apprehension that the buildings of Mont St.-Michel are not yet safe from the influence of the sea. M. Antonin Proust, the president of the Commission of Historic Monuments, who has never considered his office to be a sinecure, is about to pay another visit to the Mont. As the buildings are of more than national interest, would it not be well—as well as complimentary—if a few English engineers and architects were asked to co-operate in forming a report?

A society has been lately formed which, although unofficial, is likely to do good service in supplementing the organisation of the Monuments Commission. It is called la Société des Amis des Monuments Parisiens. By a late resolution, it has been proposed that the members should endeavour to identify the work of Philibert Delorme which may remain in the Tuileries, and seek for some traces of the plan of the old church of St. Geneviève. Any English architects who may be students in Paris ought to join this society; the annual subscription is only 6 frs. M. Charles Normand, architect, 215 Boulevard Saint-Germain, is the honorary secretary.

A few years ago it was estimated that the Bibliothèque Nationale contained 8,000 volumes of engravings, and upwards of 1,300,000 plates. But according to a late return, there are now 14,500 volumes and 4,000 portfolios of engravings, in which are over two millions of plates. It is perhaps as difficult to count the prints as to count the rooms in the Vatican; and no one who has made use of the galleries in the Place Louvois can be surprised at any figures, however high, for the treasures are apparently inexhaustible. During generations they have been open to the world, while until almost recently the Print department of the British Museum was a comfortable seclusion for the keeper and his friends.

One is always sure to find a great many nationalities hospitably received in the Salon. Almost as remote from Paris life as the Cracow pageant is the scene in the Connemara cabin which a Mr. O'Kelly has painted. The picture has already appeared in the Royal Academy in London. The subject is the Celebration of Mass in a peasant's hut. There is a grave earnestness about the congregation, which reproves the frivolity of some of the pictures which are hung near in the Salon. The question must arise why a work which has sustained the ordeal of a jury in London and Paris has not found a purchaser? Mr. O'Kelly's work is admirable in every respect, but in Ireland an artist is expected to subsist without patronage. Here is a national subject, yet it is not appreciated. In a public gallery in Canada, the United States, or Australia, it would be a popular picture.

In the course of a week, or thereabouts, there will be a great deal of excitement among French artists, for the time will then have arrived for the determination of the pictures which are to be exalted by first, second, and third medals, and by honourable mentions. Probably there never was a year when the decision will be more difficult. Foreign works are excluded, but some of them, notably the colossal painting by M. Matejko, of Cracow, would otherwise be certain of recognition. The subject is Albert of Prussia swearing fidelity to Sigismund I. at Cracow in 1525, and the picture is remarkable for its vigorous painting, the figures being life-size, and the colour is Oriental in richness.

Although the Salon contains nearly 5,000 works, the space is insufficient for the works which have been produced. A rival gallery, on a temporary structure at the Tuileries, was inaugurated on Wednesday by President Grévy, and will be opened to the public on the 16th inst. The external appearance of the hall is not attractive, but there are many good works that can be seen within. The official recognition which the scheme has obtained has given rise to speculation, and there may be some ground for supposing that among the bureaucrats the independent position taken by the French artists in respect of triennial exhibitions has not met with approval.

The English church in the Rue d'Agnesseau is now in the hands of the builders, and the exterior will shortly be more worthy of an embassy chapel. The building, it will be remembered, is supposed to be Gothic in style; unfortunately it is of the carpenter's type. The new exterior has been differently treated, and, in spite of drawbacks of a narrow frontage and limited means, a satisfactory result has been produced. M. Richard is the general contractor, but as it was found difficult to obtain carvers who were adepts in the details of English Gothic, a few English workmen have been employed. The interior of the church is as chilling as the sternest Puritan could desire. An English church that will be equal to that of the Americans seems to be unattainable, yet no one seems to know why there should be a difficulty.

## ILLUSTRATIONS.

HOUSE FOR MR. ROBERT COURAGE, AT SNOWDENHAM, BRAMLEY SURREY.

THE house has a somewhat peculiar plan, necessitated by the fact that the site selected is the sharp slope of a hill. The extensive basement has been built of concrete of selenitic lime and stone dug on the spot, and broken with one of MARSDEN'S steam crackers. The concrete for the groining of the terrace is made with Portland cement. This part of the work has been executed by Mr. H. BROWN, builder, of Bramley. The upper portion of the house, which contains much oak-work, is being built by Mr. R. PINK, of Milford, the plumbing being done by Mr. G. JONES, of Godalming, and Mr. B. BOOTH being clerk of works. The architect is Mr. RALPH NEVILL, F.S.A., of High Street, Guildford, and 12 South Square, Gray's Inn, W.C.

HOUSE, PONNEREAU ROAD, IPSWICH.

NEW TOWER AND SPIRE, ETC., BALLYBRACK ROMAN CATHOLIC CHURCH.

THIS building stands on an elevated site overlooking the sea, situate a few miles south of Dublin. The new works include a tower and spire, baptistery, and staircase to gallery, and are indicated by a black tint on plan.

The height of the tower to the cornice is 76 feet, and of the spire, to the top of cross, is 142 feet. The building is in Dalkey granite, and is now nearly completed. The contractor is Mr. J. LONG, of Kingstown, co. Dublin, and the architect Mr. G. C. ASHLIN, A.R.H.A., Dublin.

INTARSIA DOOR, SALA DEGLI ANGELI, DUCAL PALACE, URBINO.

## ROCHE ABBEY, YORKSHIRE.

EXPLORATIONS are being carried on at Roche Abbey, one of the principal seats of antiquity in South Yorkshire, by Viscount Lumley, and some interesting discoveries have been made. The Abbey was a Cistercian monastery, and scarcely any trace of it now remains beyond portions of the church, principally of the east end, which occupied the north side of the quadrangle. The explorations were commenced about two months ago with a view of discovering traces of the tomb of Matilda of York, Countess of Cambridge, who was buried in one of the side chapels, and whose tomb was surmounted by an alabaster slab and an effigy; but so far efforts in this direction have been unsuccessful, and the attention of the workmen is now directed to other parts of the edifice. The foundations of the exterior of the chancel have been exposed, and it is in contemplation to uncover the whole of the church, which will be allowed to remain open afterwards for inspection. Although the tomb of the Countess of Cambridge has not been discovered, several highly interesting "finds" have been made. A large collection of fragments of the mullions and tracery of the east window has been discovered, and it is hoped that an effort will shortly be made to re-form the stonework of the window. Owing to the thoroughness with which those entrusted with the demolition of the Abbey carried out their task, it will be an exceedingly difficult operation. The workmen are now engaged in excavating from the middle of the nave towards the chancel, and against the base of one of the nave columns there has been found two figure heads, and on another stone were portions of the figure of an angel holding a shield. It has been said that there exists a subterranean passage leading from the Abbey under the stream which runs through the grounds in the direction of Laughton. This supposed passage is now thought to be nothing more than a drain, and all idea of exploring it has been given up. The recent discoveries include the finding of the well from which it is believed the ancient monks derived their principal water-supply.



## THE CONFERENCE OF ARCHITECTS.

THE proceedings were resumed on Friday morning, May 9, when the fifth meeting of the Conference was held. Mr. Arthur Cates, who presided, took the chair shortly after eleven o'clock.

The CHAIRMAN said that, though the attendance was rather thin, he would begin the business of the meeting at once, as the time at their disposal was limited. The room would no doubt fill up as they proceeded. In calling on Mr. Phené Spiers for his paper, he said he hoped it would give them the opportunity of originating some practical results which would bear fruit.

Mr. R. PHENÉ SPIERS, F.S.A., then read the following paper:—

On the French *Diplôme d'Architecte* and the German System of Architectural Education.

The communication which I have been asked to make on the French architectural diploma and on German architectural education is the outcome of a discussion which took place at the Royal Institute of British Architects on February 4 this year, after the reading of a paper by Mr. William H. White, the subject being "A Brief Review of the Education and Position of Architects in France since the year 1671." This paper, and the discussion which followed it, have been fully reported in the first half of the "Transactions" of the Institute for the present session, just published.

The latest regulations for the courses of study of the *Ecole des Beaux-Arts*, and the qualifications for the *Diplôme d'Architecte*, are fully set forth in the *Journal Officiel de la République Française* of October 10, 1883. I propose now to give a summary only of these, but would suggest that a translation in full ought to appear in the Institute "Transactions" for reference. I have further obtained information from various sources as to the working of the Diploma, and a list of the subjects for design given since its establishment in 1869. The summary I propose giving will be in some measure the complement of the remarks I made in the discussion following Mr. White's paper, when I confined myself chiefly to a description of an *atelier* and the working out of the designs therein under the advice of the Principal or *Patron*. As the *Diplôme* examinations can be passed only by those who have obtained certain *valeurs* or marks in the first class or upper division of the *Ecole des Beaux-Arts*, I am obliged to describe the curriculum of the obligatory courses of study there before specifying those referring to the *Diplôme* alone.

## Courses of Study.

The *Ecole des Beaux-Arts* affords gratuitous instruction to all comers, whether Frenchmen or belonging to other nations, between the ages of fifteen and thirty, on condition of their passing an examination. This examination takes place twice a year, in March and in July, and is divided into two sections; the first consisting of a drawing from the cast (either ornament or head of figure) made in the school in eight hours; of a model in clay of an ornament in bas-relief, also in eight hours; and of an architectural design to be executed from a programme given at the time in twelve hours. Those only who satisfy the examiners as to the first test can pass on to the second, which consists—1st, of a written examination in arithmetic, algebra (including quadratics and logarithms and geometry); 2nd, an oral examination in the same; 3rd, an examination in descriptive geometry; 4th, a written examination in history, followed by an oral examination in the same. Those who pass this second test become students of the second class of the school, and are placed according to the number of marks received in the examination.

The course of study in the second class consists of—(1) *Concours d'Architecture*, or competitions in architectural design; (2) *Concours* in construction, mathematics, &c.; (3) drawing from the ornamental cast, modelling from the cast (bas-relief only), and drawing from the antique figure. The first, or *Concours d'Architecture*, consists each year of the following courses:—(a) Six studies of the orders or portions of the same to a large scale, shaded in Indian ink. In explanation of these studies, I may note that it was found that many of the students entered the school with very little knowledge of the ancient styles of architecture, and very little power of drawing them. To remedy these defects, the new regulations require drawings of detail to a large scale, shaded in Indian ink, such drawings including studies of the orders, and of sundry details, as doorways, windows, cornices, &c. This obliges the student to be a good draughtsman, and to have some acquaintance with ancient architectural styles before he attempts to design. (b) Six complete designs (plans, elevations, and section), the original sketch being made in the school in twelve hours, and retained by the authorities. Before being allowed to compete in this course, at least two mentions must be obtained in the first course (analytical studies). (c) Six sketch designs finished in colours, and made in the school in twelve hours. (d) Two studies in ancient architectural styles, the programme for which is set by the Professor of History.

The second series of studies consists of—(a) A course of lectures in mathematics and mechanics, followed by an examination partly written and partly oral. (b) A course of lectures on descrip-

tive geometry. (c) A course of lectures on stereotomy, surveying, and levelling. (d) A course of lectures on perspective. These three courses are accompanied by the requirement to make a certain number of *épreuves* or drawings in the atelier, illustrating the course, and followed in each case by an *épreuve* or drawing made in the school *en loge* in twelve hours, and by an oral examination; and, lastly (e), a course of lectures in construction, followed (at intervals during the year) by studies in stone, wood, and iron construction, sketches for which are made in the school in twelve hours, followed by a complete set of drawings in each subject, done in the atelier in fourteen days, and one "*concours de construction générale*," in which the working drawings for a building are worked out with specification complete as if it were going to be constructed, three months being allowed to make the drawings in, the original design being made in the school in twelve hours. A *viva-voce* examination of every student is held in explanation of the drawings submitted in each of the above *concours*.

The third series of studies consists of drawings from the plaster-cast of ornament, modelling in bas-relief from the cast, and drawing of the antique figure. Twelve hours is given for the execution of any one drawing or model, done at the student's leisure, and not necessarily in one, two, or three sittings. At least two of each of these are required to obtain the medal or *mention* necessary for passing to the first class, and the Professor of Drawing decides when the drawings or models are good enough to be submitted to the jury.

The courses of study thus cited take about three years to go through; that is to say, that an average student giving all his time can obtain a sufficient number of marks or *valeurs* in three years to enter the upper school.

## Recompenses.

The *recompenses* given are:—For the *Concours d'Eléments Analytiques* (studies of the Orders), half-mentions. *Projets rendus* (finished drawings), whole and half-mentions. *Esquisses* (sketch designs), half-mentions. Mathematics, descriptive geometry, stereotomy, and perspective, third medals and mentions in each. For construction, first, second, and third medals and mentions. For drawing of ornament, antique-figure, for modelling, and for studies of history, third medals and mentions.

The values of these recompenses in second class are:—Half or second mentions, 1 *valeur*; 1st mention, 2 *valeurs*; 3rd medal, 3 *valeurs*; 2nd medal, 4 *valeurs*; 1st medal, 5 *valeurs*.

To enter the upper school it is necessary to have obtained six marks in architectural design, medals or mentions in mathematics, descriptive geometry, stereotomy, construction, and perspective; a medal or mention in drawing of ornament, modelling, and drawing of the figure. In the first class of the school in each year the courses of study consist of:—Six competitions in Architectural Design—finished drawings (*projets rendus*). Six competitions in Architectural Design—sketches design only (*esquisse-esquisse*). One competition of Composition in Ornament. (Done in the school in seven days.) Two competitions of Design in Architecture reproducing a style selected by the Professor. (The sketches for which are done in twelve hours *en loge* and the drawings made in ten days in the atelier.) Two competitions in Drawing from the Figure. (Twelve hours each.) Two competitions in Modelling of Ornament. (Two hours each.)

The recompenses are:—For architectural design, finished drawings—1st medals, 2nd medals, and 1st mentions. For architectural design, sketches—2nd medals and 2nd mentions. For ornament and design in selected styles—1st medals, 2nd medals, and 1st mentions. For drawing of figure and modelling—1st medals, 2nd medals, and 2nd mentions.

The values of these recompenses in the first class are different from those in the second, and are:—1st medal equals three *valeurs*, 2nd medal equals two *valeurs*, 1st mention equals one *valeur*, and 2nd mention equals a half *valeur*. Besides these are the *valeurs* accorded to those who take part in the great competition for the *Grand Prix* described in Mr. White's paper, viz., being among the ten selected, two *valeurs* or marks, and in addition the following:—First-second *Grand Prix*, four *valeurs* or marks; second-second *Grand Prix*, three *valeurs* or marks; mention, two *valeurs* or marks.

## Diploma.

After these preliminary explanations, I am able to come to the immediate purpose of my communication, viz., the examination required for the *Diplôme d'Architecte*. The first examination was held in 1862, when five candidates passed; but it was not until 1869 that the formal decree of the Government instituting it was passed. No examination was held in 1871 (the year of the war), or in 1873, 1874, and 1875—no candidates, I suppose, having presented themselves.

Up to the present time ninety-four candidates have obtained the Diploma, by far the greater number being in the last four years. The subjects given have been as follows:—

Programme of subjects of designs for candidates for the *Diplôme d'Architecte*, since its institution, of the *Ecole Nationale et Spéciale des Beaux-Arts*:—1869. A town mansion. 1870. An academy of music. 1872. *Salle des pas perdus*, or great hall of a palace of justice (law courts). 1876. A residence for three artists



—a painter, a sculptor, and an architect. 1877. A laboratory of natural history on the sea-coast. 1878. Four small residences for a tourist—one in Switzerland, one in England, one in Spain, and one in Italy. 1879. A carriage and foot-passenger passage through a palace. 1880. A hall for the public meetings of the Institut Nationale de France. 1881. A municipal library for a large provincial town of France. 1882. A house for the Société Centrale des Architectes, Paris. 1883. A concert hall for a large provincial town.

The examination is held once every year. No student can present himself as a candidate who has not obtained nine *valeurs*, or marks, in the first class of the school, either in architectural design, composition of ornament, or in the competition for ornament for the *Grand Prix*, and one mark in architectural history.

The subject for design consists of a building or portion of a building, worked out with plans, elevations, sections, working drawings, details full size, and specification complete, as if the building were to be carried out, with a *devis estimatif*, or schedule of quantities, of one trade. Six months are given to work it out, the original sketch being made in the school. On the submission of the designs the candidates are required to pass an oral examination before their drawings on the various details there shown, the theory and practice of their construction, the qualities and defects of the materials employed, their strength and stability; as also an oral examination on the history of architecture, on the elements of physics and chemistry applied to construction, on building legislation, and on the system of accounts.

The judges consist of the director of the school and the secretary (M. Albert Lenoir) of the school; three professors of the school *ateliers*; three professors of the external *ateliers*; the professors of Construction, of the History of Architecture, of the Theory of Architecture, of Physics and Chemistry, and of Building Legislation; two members of the School Council; an Inspecteur-Général of Historic Monuments; an Inspecteur-Général of Ecclesiastical Buildings (*édifices diocésains*); and an Inspecteur-Général of Public Works—the last three nominated by the Government; eighteen members in all.

I am inclined to believe that the standard required to obtain the *Diplôme d'Architecte* is much too high, and in this idea I am supported by one or two French architects whose opinions I have asked. It means six or seven years' serious study in Paris, and the provincial architect is not able always to afford so long a period; nor does his position or remuneration as *Architecte du Département* require a call for so searching an examination or multiplied preliminaries.

I have occupied so much of your time in my description of the French *Diplôme d'Architecte* that I must curtail the remainder of my communication to you respecting the German schools. So many years also have passed since I examined in detail the working of the schools of Berlin, Munich, Vienna, and Stuttgart, that I may not be giving you the latest developments. The papers of the examinations held in Berlin for the degrees of *Bauführer* (building inspector) and *Baumeister* (architect) are published in our "Transactions" of 1859-60, and will show you the very high standard (much too high, I think, in mathematics) required there. I will only, therefore, explain generally the system of education in the above capitals of Germany and Austria.

#### German and Austrian Systems.

In Germany, or rather in Prussia, the student comes from the university or school with a good knowledge of geometrical drawing, or drawing from the cast, and of mathematics and physics. He first enters the office of an architect for one year, where he picks up what he can, as in England. He does not pay anything, his knowledge of drawing and of descriptive geometry placing him in a position to be able to render assistance of value in return for the privilege of working there. He has then to pass a slight examination, and studies in the architectural school for two years. His attention there is turned to all the theoretical and practical points of the profession. He copies drawings made by well-known architects—if at Berlin, chiefly Schinkel's and Stüler's—and divides the time between making these copies and the composition of original designs (which are, of course, more or less adaptations of what he has learned in copying). He attends lectures on physics, mathematics, construction, ventilation and warming, sanitary science, and the principles and practice of estimating and writing specifications. At the end of the second year he passes an examination, and takes the title of *Bauführer*, or inspector. If he fails to pass he continues his studies. If he aims at a higher position he obtains an appointment on some Government building as an inspector or clerk (receiving a nominal salary) for three years, and then enters the school again in the first class to study for two years more, the studies being a very advanced kind. At the end of that time he passes an examination as *Baumeister* (literally "master of building"), and he then becomes a Government architect, or practises on his own account. At Munich and Stuttgart, the capitals of Bavaria and Wurtemberg, the practice still obtains, I believe, of studying one year in an architect's office before entering the architectural or polytechnic schools, as they are called. Two or three years are spent in the school, followed

by examinations. I am not aware whether the examination is recognised by the Governments of those countries.

In Germany generally architects and engineers study together in the same school; in France, architects, painters, and sculptors.

In Vienna architects have their special academy; there are Classic and Gothic professors, with their respective *ateliers* or studios; in many cases the student passes from one to the other. There are complete courses of lectures, competitions in design, and examinations held at the end of each term, as in an English university or school. In 1863, or thereabouts, a new system of study was introduced which is worth notice. The senior students of the school, about twenty in number, make an excursion with their professor twice or three times in the year for a period of a fortnight or three weeks. They take up one or two important buildings and measure them, taking plans, sections, elevations, and details (very similar to the work done in some of the series of excursions organised and carried out by the late Mr. Edmund Sharpe with the members of the Association). About 5% is allowed to each student by the Government, and his drawings become the property of the Academy. On returning to the school in Vienna, these drawings are worked out to a large scale, traced in lithographic ink, and reproduced, each student having a copy. Alternately with the making of these drawings they work out designs of their own, and naturally these designs are inspired with that feeling which they have imbibed when measuring and drawing the ancient edifices of the country.

So many years are spent in the German schools in training that comparatively few of the students make a Continental tour. In Vienna during one or two years after leaving the Academy, the Austrian student travels through North Italy; and when the Quadrilateral was in their possession special facilities were afforded for the careful delineation of the finest works of the Italian Gothic and Renaissance styles. The superiority of modern architecture in Vienna to that in Germany generally I attribute to these Continental studies.

Before quitting the subject of foreign education, it will be interesting to note that in Spain, throughout the length and breadth of the land, no one can practise as an architect who has not received the diploma of the Architectural School of Madrid. Except that the examination which follows after three or more years' studies in the school is preceded by a serious test in mathematics and physics, I am unable to give you further information.

#### System of English Architectural Training.

May I venture to trespass a few minutes more to draw a parallel between English and foreign architectural training? The first great failing in England is that the student coming straight from school is not yet prepared to make that use of the practical training to be had in the office which is universally assumed. He has little or no knowledge of freehand or geometrical drawing, of physics, mechanics, or of any of the elements of architectural style; he flounders about, therefore, in the sometimes styleless design of the architect in whose office he may be placed, and acquires by the longest possible process a certain knowledge of a mixture of style and no style, second-hand: his powers of reasoning in design, as a rule, are not brought into play until his articles are terminated, and then want of time and absolute lack of training at once curtail his ideas and cramp his imagination. He has picked up an idea here and there in the office, and numerous details, but he finds himself unable to grasp the composition of a building of any size. In many cases he has never had an opportunity of visiting or studying any one of the buildings the drawings of which he has been continually at work on; and, therefore, supposing he has been thinking for himself, has never seen the results of his thoughts and inquiries (this observation applies more to London than to provincial students). He has, in fact, taken from three to five years to learn imperfectly what might have been learned in one or two if his mind had been previously properly trained to receive it.

#### French System.

If we turn now to France we find that foundation of knowledge laid which is wanting in England. Before the student enters any office, his hand is trained to draw freehand in the primary schools, and his mind developed with a knowledge of applied mathematics and descriptive geometry. He enters an *atelier*, and the elements of style are learned in the Ecole des Beaux-Arts. Architectural drawing is carried to a high standard. Original designs are worked out, interspersed with instruction in construction of various kinds, and all the sciences cognate to architecture. The student works not so much in rivalry with his fellows as in *atelier* against *atelier*. This rivalry of the studios, which I described in the discussion following Mr. White's paper, is the most important feature in French architectural education. The isolated effort of one individual in rivalry with another may—nay, must—continually fail, because the development of style is not, and never can be, worked out entirely by one man. An original genius suggests a theory, a second carries it a little further, by numerous others it is taken up, till at last this new idea becomes an established fact. A number of men working in one *atelier* form a school in friendly rivalry against others. Each student in it exerts himself to his utmost.



The senior students advise the juniors in the study of their designs. The junior students in return work for the senior students, and acquire knowledge of style by so doing. The energies of both are brought into play, and this unison of feeling, this mutual co-operation, enables the student to acquire great knowledge of style, rapidity of execution, and a serious study of design in a short time. In this we find the secret of the success of the French school, so far as it goes. Where, then, does it fail? It fails because a studio or *atelier* is not an office where work to be executed is drawn out, or a *chantier* where it is being carried out. Those students whose means necessitate their working for their living whilst their studies are continued from time to time at the school, do acquire that practical training which fits them for their vocation, and the most prosperous architects in the present day in France (and by prosperous I mean not those highest in rank, but who are the most sought after by clients), are not, as a rule, the past Grand Prix men, but those who commenced their practical training at an earlier period of their existence. On the other hand, it must not be forgotten that the high standard of design which exists in France is due to those architects who, in one sense, have sacrificed themselves and their prosperity (so far as a large income is concerned) by continuing their studies till they had obtained the Grand Prix, and then devoting four years more to research and study in Italy and Greece. The important changes which have in late years been effected in the Ecole des Beaux-Arts show that the Government is fully alive to the defects in its system of education, and the practical character given to the *Diplôme d'Architecte* may bring about an important change in the architecture of French buildings.

#### German System.

In Berlin this want of practical training is avoided by the student being obliged to study for one year in an architect's office before entering the school, and (if he aspires to the rank of *Bau-meister*) by the spending of three years as inspector or clerk on Government buildings before he passes to his second and superior training in the school. Compared, however, with French education, the German fails in art because he is linked with the engineer instead of with the painter or sculptor, and, further, by working in one *atelier* (viz. the school) and under one set of professors, the rivalry lies between student and student, and not between *atelier* and *atelier*. Add to this that the custom (whether it continues or not I do not know) of copying eternally the designs of Schinkel, his ceilings, staircases, cornices, &c., cramps the German architectural mind, and prevents its emancipation into a freer line of thought and imagination.

#### Educational Progress in England.

Of late years in England an immense progress has been made due chiefly to two causes:—1st. The great development of the practice of drawing and measuring ancient buildings encouraged by the rewards of the Institute, of the Architectural Association, and of the Royal Academy, and the subsequent publication of such drawings in the Architectural Association Sketch Book and other publications, and in the professional journals; and, 2nd, the extraordinary enterprise shown in the publication of drawings of actual modern buildings and of competition designs in the professional journals of the day. Where all of them have been doing their best to supply a demand, it would be invidious to name specially any one of them, but there can be no doubt that the immense development and freedom of architectural design during the last ten years in England, and the rapid advance in draughtsmanship, is more or less due to the placing within the means of the poorest student a series of illustrations of the latest developments of architectural style. Two other educational sources must here be noted:—1st. The meetings and classes of the Architectural Association, a society unique in its character, existing in no other country and in no other profession; and, 2ndly, the Royal Academy, which, for obvious reasons, I should have refrained from mentioning, were it not to pay tribute to the services of those members of the Academy who, in late years as visitors, have given the students the advantage of their experience and of those other qualifications which have brought them among the elect. And here I venture to take this opportunity of rendering a personal tribute to the memory of one of our greatest artists whose loss we still deplore, the late Mr. George Edmund Street. The long experience I have had of architectural training enables me to judge, perhaps better than anyone else, of the extraordinary value of the services which Mr. Street rendered in the Architectural School of the Royal Academy. The rapidity and range of his grasp of such subjects of design as were being worked out by the students, the wonderful fertility and originality of his mind, and the peculiarly happy way in which he (accepting the scheme of the student's work) turned it from bad into good architecture, and in a few minutes gave him the benefit of forty years' experience, promised to lay the foundation of a school of architectural designers in this country which would have left its mark in the architecture of this last quarter of the nineteenth century. His career as visitor in the Architectural School was, alas! too short, but the influence of his work remains with us; and among those

who, in addition to his advice in the Academy, received their architectural training in his office, there are some who have already taken a foremost place in the profession, and others who are, I trust, destined to do so.

#### Discussion.

The CHAIRMAN, in opening a discussion, said that Mr. Spiers's paper, which one and all must have listened to with the greatest pleasure, treated of a subject the importance of which it was hardly possible to over-estimate, as the future of the profession and the honour of our country in the art depended upon the education of the students of architecture. Young men upon whom that future depended were under the charge of leading members of the profession, who received premiums for allowing them what was often only the run of the office. Mr. Phené Spiers, who was really the representative of architectural education in this country, had devoted a great deal of time that he might bring before them in a summarised form his knowledge and experience of the French and German systems of architectural education, and it showed a rather disheartening difference between the advantages open to the student abroad over the English student. It was, then, to be regretted that the leading members of the profession should, in the interest of the knowledge they were distinguished by now, and would be distinguished for in the future, on the present occasion be distinguished by their absence from the meeting. It would have been more gratifying if they had set aside present engagements in order to favour the profession at large with their sentiments on the position and prospects of the profession now and in the future. The Chairman said he could not speak from his own knowledge of the Royal Academy school; but, all the same, he could, from a knowledge of his own pupils, testify to its excellence. He endorsed Mr. Spiers's remarks on the late Mr. Street, who, when they lost him, was developing a system of architectural education at the Royal Academy school, which brought out the capabilities of students in a way which in England he believed had never been done before. All honour, he said, to Mr. Street for it, and he hoped the Royal Academy would continue to give all possible help to Mr. Spiers in that which, after all, was but a feeble effort in comparison with what was done abroad. The Chairman then noticed the striking character of the drawings exhibited, and referred particularly to those of Mr. Burnett (son of Mr. Burnett of Glasgow) as an instance of natural abilities developed at an early age, and great advantages gained by following a course of studies such as Mr. Spiers had indicated. The Chairman then noticed an unsatisfactory feature in regard to English students, from the want of any particular guidance in an architect's office, or only such limited guidance as was got in competing for the prizes offered annually by the Institute, &c., limited because it was of advantage only to those who would, prizes or no prizes, make their mark in life.

Mr. LAWRENCE HARVEY said he had had experience of the German system of education, having passed through a course under Professor Semper, at Zurich. The fault of the German system seemed to be that in routine matters it was far too school-boyish, and this was the Professor's opinion also, though it did not come within his power to alter the course of studies as fixed. In Paris matters were different. There was greater freedom, less control, and studies were not conducted on the school-boy principle, and consequently studies were pursued with greater zest, and times and hours given up to learning that would not be expected from a school-boy. He belonged to the *atelier* of M. Hippolyte le Bas, having Garnier and Lefuel for fellow pupils. Indeed, most of the distinguished French architects had been pupils of M. le Bas. Mr. Harvey pointed out that scale of fees paid by pupils diminished as the student acquired proficiency. On taking a medal the patron would ask for no fees at all. What motive had the French architect in opening an *atelier* for pupils without fees? Partly, no doubt, because of the *pour le gloire* sentiment which pervaded their character, and secondly, because to become known as a good teacher was one of the best stepping-stones to the highest honours that France could give. Now he had a scheme to propose which he thought would offer a motive to English architects to try and turn out pupils, masters in their art, without costing a penny. In the Institute they awarded prizes, had an examination for associate-ship, &c. When they proclaimed the name of a pupil who had taken prizes or honours, they should proclaim the name of his master, for a great part of the merit of the pupil depended on the master. If this practice were adopted a change would, he believed, soon be wrought, and, just as was the case in France, some masters' names would become known as being particularly good masters. M. le Bas had not carried out any great work—such, for instance, as the Grand Opéra at Paris—but he had made his name by being a master. Some men had a particular aptitude for being masters, and this was their only means of bringing themselves into notice. They had not the influence to secure a work of any magnitude to bring their name into notice. When architects designed and carried out a great work all the world knew of it, and talked of them. Honours were given to them, gold medals awarded them, or honours of knighthood, &c. All this was rather foolish in one point of view. To call Wren, Sir



Christopher, was not much compared to his title of architect of St. Paul's. But the merits of a teacher were unknown to the world at large; and it was these unknown teachers who were rather the men to be encouraged with honours. He had seen work of pupils of the late Mr. Street. That master inspired life in their works because it was the touch of an artist touching another. Had Street lived, and his pupils taken prizes year after year, even if he had been professionally an unfortunate man, still he would have been pointed to as a man of the highest talent, and as one who was doing a great work. Mr. Harvey said that having seen how they worked in Germany, in France, and in London, he preferred the London system; for it was left to the pupil's initiative to learn, and the pupil learnt in a totally different way from that of a pupil at a desk. Here also were the architectural newspapers, architectural societies, all means of learning for one who had the will to learn. He did not think the new system in Paris, started by M. Guillaume, would succeed. It had killed the *ateliers*, and the *ateliers* in Paris were simply the development of what we had in London, only, where an architect had fifty or sixty pupils, they could not all be in the office, so other accommodation was provided for them, and became in fact the *atelier*. This *atelier* started, pupils came to take a pride in their master, just as pupils here were proud of having been in the offices of Street or Scott.

Professor KERR said that it was a remarkable thing when one contemplated the extremely delicate organisation devoted to the study of architecture in France and Germany, that, without anything of the sort, English students seemed to find their way to design in their own fashion with great success. We had no school of architecture except the Royal Academy. The South Kensington school was, as far as he was told, simply a disgrace to the Government, and the money spent on it shamefully wasted; whereas by dismissing the soldiers, and by admitting the architects, it might, no doubt, be made of great assistance to that greatest of all arts, the art which they, as architects, represented. The way students, and students of high class, attained their knowledge of design was very simple. Professor Kerr described how the student went about it, a method resulting from a different line, and a more directly English line, being taken in a commercial country, where youths could not be persuaded to devote so many years of life to what was called academical study as was done in France, and who had to begin business earlier, and keep to business however sublimated his ideas might be as to art. Professor Kerr went on to say that the premium system was not so much in vogue nowadays, and how he remembered an architect of high repute, Mr. John Shaw, who had made it a rule never to take a penny with a pupil, and, when they showed sufficient ability, he even paid them for their services. Mr. Kerr also noticed what he called a peculiarity of English architectural education, as seen in the illustrations of the professional journals, though he feared these journals were competing with one another rather unnecessarily as regarded quantity. He would rather see more in the way of quality. This peculiarly English institution of the illustration of actual building operations, given in the papers week by week, was one which could not be considered of too great importance. From these illustrations, which were facsimiles of architects' own drawings, students were able to obtain information, instruction, advice, direction—call it what they pleased—to a much greater extent than they could from any school or schools. Therefore, he thought the journals were entitled to be called the academical schools of the country, and that the profession ought to be by no means stingy in support and acknowledgment of those whose commercial enterprise was in question, and of the great service that enterprise was doing for the education of the profession. Mr. Kerr next spoke of Mr. Phené Spiers's school. It was a very admirable school, wherein students were taken through a regular course of study, and he said he would like to see similar schools established at the Institute and at South Kensington. There was no fear of overdoing the academical education of our students, and he should not be sorry to see a rivalry spring up between the different schools. As it was, the English student educated himself in a way that must be called rough-and-ready, and failed in that delicacy and finish common to the French student for want of this academical training. Professor Kerr concluded his remarks by saying that if in England we were allowed to continue to pursue our own course without advice from abroad, which he was sure we should not accept, if we were sensible enough to follow our own way, he was prepared to expect to find England at the head of all architectural schools. There was something promising now in the highest degree, and no one could look back on the last thirty or forty years without being satisfied that we were pursuing a course which must land us in an ascendancy of some sort.

Mr. R. K. FREEMAN, of Bolton, alluded to the separation that seemed to exist too often between the theoretical and practical part of the profession: for instance, there were any number of good draughtsmen, but few who combined good draughtsmanship with a practical knowledge of carrying out a good building. From time to time letters had appeared in the papers about the hardships assistants had in getting a good place. His idea was that a good man could always obtain a good place, and he thought the writers would have done better, instead of writing letters, to have spent

the time in finding out their own deficiencies. Any scheme of architectural education, having London for its centre, ought to have such appliances in the provinces as would bring its advantages within the reach of students in all parts of England. People had to think twice before they left any particular locality to spend eight years in study elsewhere, as they did in Germany. To do so would be a serious drawback to many, as it would involve the loss of connection, &c.

Mr. W. H. WHITE said, in reference to coupling the name of a master with that of his pupil, that some years ago he used to send drawings to the Paris Salon, and once sent in a drawing without the name of his master. He then wrote saying that his master was in London, and the name was put in the catalogue.

Mr. GRUNING proposed a vote of thanks to Mr. Spiers for his paper. It was a pity, he said, that more of the senior members had not been present to profit by the advice given them as to forwarding the education of their pupils. He spoke of the benefits to be obtained in the Royal Academy School. The value of the Architectural Association, he said, was almost equally great, as he could see every day in his own office.

Mr. BRUTON, Oxford, seconded the vote. A pupil in the office of a provincial architect, he said, could not have the same advantages as a pupil in a London office. He only wished some means could be devised for pupils in the country to have some such advantages as could be had in the London schools.

Mr. WOODWARD, speaking of illustrations in the newspapers, said that with so many they were not able to give the attention to any that they deserved.

Mr. BLAGROVE said he thought there might be an objection to students giving the names of their so-called masters. Often when a pupil did get on, he got on in spite of his master. The seniors, he thought, had shown good taste in being absent from the meeting.

Mr. SLATER said that an English student had not the same means of getting the instruction, not alone in design, construction, &c., but in the concomitant subjects allied to architecture, as they had in foreign schools. Notwithstanding all that Professor Kerr had said of the beauty of our designs as exhibited, or as seen in sketch-books and newspapers, no doubt they were beautiful, but were they architecture? A good man would get on in this country, no doubt, in spite of everything, but it took him a great deal longer time to obtain his knowledge than it would had he the use of such schools as they had abroad. Some incentive should be given to induce students to acquire a knowledge of languages, in addition to their own tongue. It would open the information of valuable works which otherwise were sealed books to them.

Mr. HUGH McLACHLAN said that in England a student might learn nearly everything if he only knew how to go about it. The majority of students went into architects' offices, but, as no one pointed out the way to them, they floundered on as best they could, and the result was that the greater number of the buildings carried out in England were a disgrace to the country.

Mr. ALDRIDGE (Liverpool) said the word "system" struck him at the outset. There was a system of education in France and a system in Germany, but he was afraid there was very little system in England. That, as to this country, was, he thought, its initial error, and a grave one. England had produced great architects, but it was in spite of her difficulties. It was not very easy to say how the matter was to be improved. He would be glad if the system of pupilage were abolished, but one could not abolish it without something to take its place. Fathers and guardians had an idea that their sons or wards, having been articled in an architect's office, would at the end of three years come out finished practitioners, having only to put a brass plate on their door, and begin practice at once. It affected not only the parents, but the pupils themselves, to the extent that they could not be got to attend lectures and classes after office hours, as they would do if they knew they had an examination before them. He had taken a good deal of interest in the Liverpool Architectural Association, and established classes which were fairly successful; a series of lectures which had been started had, however, to be abandoned or given to almost empty benches.

Herr FRANZ BALTZER, Berlin, said that the Government were about to establish an institute of master *ateliers* in connection with the Berlin Royal Academy of Arts.

The CHAIRMAN then put the vote of thanks, which was carried.

Mr. SPIERS made reply, and in the course of it said he was not at all willing to be content with the present state of our own architectural education, as he was convinced that we had a great deal yet to learn from French and German schools. The object of the South Kensington school was not to train artists, but masters of schools, and it would take many years before they could arrive at any other result. His experience in the matter of pupils was that country pupils, especially pupils from Scotland, came up better trained than London pupils. Only one of the speakers had referred to the importance of a student having some training to enable him to make proper use of opportunities offered in an office. For this training Mr. Spiers recommended King's College and the London University College, where just the class of instruction as would be obtained in a German gymnasium was to be had. Pupils often failed to get out of their masters all they were









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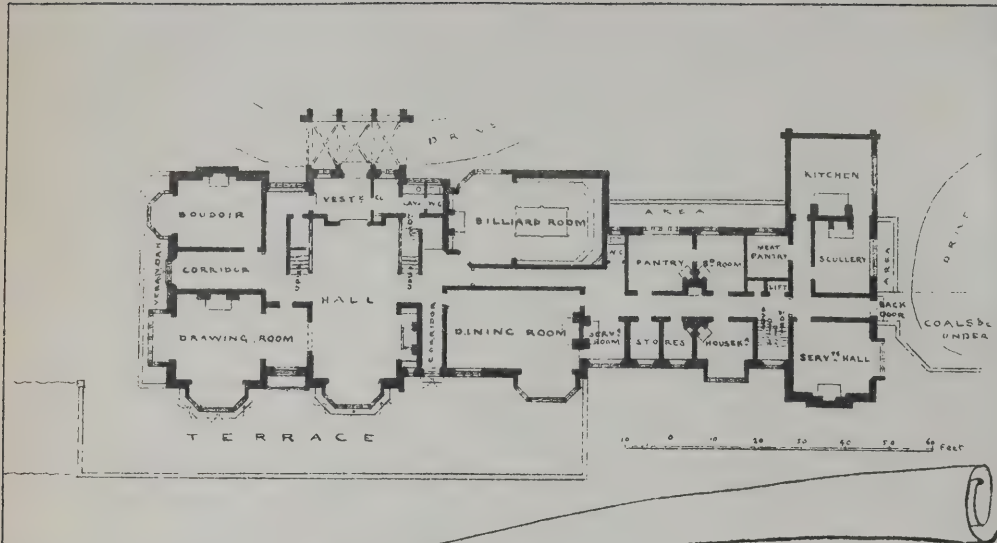


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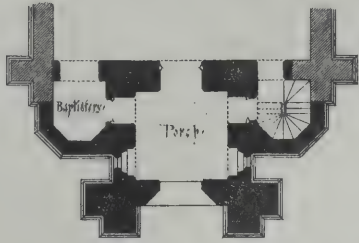






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entitled to. As pupils—and this ought to be more generally known—they had the right to copy all his designs, specifications, &c. When once a pupil became an assistant he had no right to copy his master's work.

A visit was paid in the afternoon to the workshops of Messrs. William Cubitt & Co., Gray's Inn Road.—The concluding meeting was held at 8 P.M., when Mr. Cole A. Adams, President of the Architectural Association, took the chair.

The CHAIRMAN said, following a precedent usual at the Conference, it had been decided to hold a meeting especially dedicated, if he might use the term, to the Architectural Association, and to that fact he owed the honour of being in the chair that evening. He would only be expressing the sentiments of every member of the Association in saying that the more a feeling of cordiality was cultivated between the senior and the junior society the better it would be for both. The position the Association held to its Alma Mater was one that admitted of no feeling of jealousy or rivalry. He hoped that the connection which had existed between the two bodies for more than thirty years would be kept up by the members of the Association continuing to pass into the ranks of the Institute.

The SECRETARY announced that letters had been received from the hon. sec. of the Société Centrale des Architectes at Paris, expressing his regret at being unable to be present as the representative of the Society at the Conference; from M. Bailly, one of the oldest and most respected French architects, who was obliged, as President of the Council for hanging the Salon pictures, to remain in Paris. Letters were received also from M. Garnier and others.

Mr. MAC VICAR ANDERSON said he wished on his own part, and that of his colleagues on the Council of the Institute, to express their pleasure in having their friend, Mr. Cole Adams, the President of the Architectural Association, in the chair at the concluding meeting of the Conference, and their pleasure also that Mr. Adams had been elected to serve on the Council of the Institute. He had also to express their gratification at the presence of their professional brothers from the provinces. The more they could do to promote feelings of harmony amongst themselves and their country brethren the better it would be for the profession throughout the United Kingdom.

#### English Architecture Thirty Years Hence.

Professor KERR: The question I am requested to submit to your consideration is one that has a certain particular and practical importance just now—What is the line upon which the profession of architects is moving in England? In other words, what is likely to be the position of English architects, say, thirty years hence? I am expected to confine your attention to the artistic aspect of the question, but to regard it in a practical light.

Now we pretty well understand in these scientific days that all continuous enterprises of human industry or skill, or of social or intellectual activity, when looked at in any degree under the surface of affairs, are found to be subject to the government of certain laws of progression; so that it is the critical study of the past that becomes the only means of forecasting the future. In the arts more particularly is the fact forced upon the notice of thoughtful observers that there has been a continuous current of development gliding through all the ages in one grand inevitable course: now in the sunshine, now in the shade; here swift and strong, there feeble and sluggish; but always the same; the same springs, the same issue; great men and great successes—and great failures with them—being but the greater bubbles on the surface of events, and even the humblest of workers adding every one his indispensable contribution to the tide.

#### *Architecture as an Art.*

Amongst the arts of which I venture to speak in this high tone I may at once say that I regard architecture as one of the very greatest—perhaps, indeed, beyond dispute, the most subtle and most glorious of all. It is nothing to me, standing before an assembly like this, if I should be told to moderate my language, and to ask you to veil your faces before the painter or the poet. I do nothing of the kind. I ask you, rather, to look back along an expanse of magnificent building, whose length is not to be measured by furlongs and feet, or its area by acres, but its unbroken continuity by the very ages of history, throughout at least five thousand years of time, and in whose earliest and crudest works, such is the inherent majesty of the art, Queen of the Arts, the noblest of mankind aimed at never less than the noblest homage to the noblest conceptions of the Divine.

Along this splendid line of artistic manifestation we see exemplified, more clearly than in almost anything else that philosophy can quote, the operation of the process now known by the name of evolution. The simplicity of it is indeed perfect. Given the desire to build in beauty—nothing more—and the whole scheme of architectural history throughout the past is understood; and the persistent sequence of the self-same scheme throughout the future too. Out of the desire there comes at once a continual endeavour after novelty, the diversity which supplies the material for selection. That which is worthy is reproduced; that which is not is not; and hence arise schools and styles, in the most direct and palpable

form, by the survival of the fittest. Thus it is that the study, the very studentship, of this art becomes so essentially bound up in the past; for no training worthy of the name can stop short of a review of the whole historical scheme of development. And thus it is again that the progress of change in this art appears to be so slow, the limits of even the most eager originality so narrow, and the disappointment of the too ambitious so complete.

Therefore, if we would try to understand our own position just now as representatives for the moment of this great art in England, and to foresee the attitude of our order in the next generation, the easiest mode of procedure—perhaps the only one—is to begin a generation back, and so work forward to the present day, in the hope that our research may acquire momentum enough to carry us still forward a little way into the future.

About fifty years ago, then, there happened certain occurrences which make the period a great landmark in English architectural history. In 1834 there was founded our professional guild, now so well known as the Institute of British Architects. In 1834 also the old Houses of Parliament at Westminster were burnt down. The foundation of the Institute, and its incorporation by royal charter shortly after, indicated the arrival of the profession of architects in England at a significant stage of development and of organisation. The destruction of the important edifice which had accommodated the business of the Legislature afforded an opportunity to that profession to enter upon a new career. The accession of the young Queen Victoria in 1837, involving the inauguration of a new national spirit, may be regarded as one more, and perhaps the chief, in this group of events; and if we further include the advent, within a short time afterwards, of Her Majesty's most admirable Consort, as an ally to the great cause of culture—and more especially, as regards our present purpose, with reference to the splendid new Palace of Parliament, by that time waiting for just such help as his—we see, clustered within the compass of half a dozen years, a concurrence of circumstances by which there is constituted with remarkable precision just such a point of departure as we desire.

Let me remind you of the somewhat analogous combination of events under which English architecture started on a new line of development in the latter half of the seventeenth century:—the overthrow of the gloomy Puritan ascendancy, the establishment of a new and brilliant royalty, then the disaster of a great fire—we will call it the burning of the Cathedral of London—and the rise of a great architect. So also at the time now before us we have, in the death of William the Fourth and the accession of the youthful Victoria, the old worn-out Georgian Philistinism going down at last, rude and dogged as ever, and another social system arising, entirely new and bright, the hope of the world; and therewith another great fire, and the rise of another great architect. I am accustomed to speak of Wren and Barry as the two great architects of modern England, in whose especial eminence there is as yet no third great architect quite entitled to claim a share. With both of them alike, everything their hand touched seemed to turn to a certain personal graciousness of form not easily described or accounted for; neither of them, perhaps, attaining to the ideal which we are beginning to conceive of the perfect master of our wonderful art, with whom mechanical science and æsthetic grace advance hand in hand from the sketch to the consummation; each of them, indeed, in his degree very notably a designer of superficiality, if the truth must be told; but both accomplishing that superficiality with an infinite success of elegance altogether his own artistic quality. From the Great Fire of London, that is to say, and the career of Sir Christopher Wren, to the burning of the old Parliament-house and the career of Sir Charles Barry, there extends a period of English architectural history which represents the whole development of popular Neo-Classicism, from its rise to its fall; from St. Paul's Cathedral and Greenwich Hospital to St. Pancras Church, the National Gallery, the British Museum, the Club-houses, and the plaster façades of the Regent's Park; when it was time at last that some change should come; and, if only as an enigma for your consideration, I think I see at the very beginning of this manifestation and at the very end the two most conspicuous masters of the situation, with no equal between. Perhaps I may go on to remark, as a coincidence, that from Barry's day to our own there extends the course of another remarkable architectural development, with its most powerful and characteristic exponents again at the beginning and at the end, Pugin and Street. I commend these circumstances to the curious: at the moment when Barry in his Club-houses offered us a new version of Wren's Classic, we threw it over and reverted to Gothic; and at the moment when Street in his Law Courts has brought Pugin's Gothic to supremacy, we now cast that aside and return to Classic. Such is the play of action and reaction; art is a long story, but its chapters are short.

#### *Victorian Age.*

At the commencement, then, of the Victorian age in which it is our privilege to live, this was the condition of architectural art in London. Sir John Soane, in old age and retirement, was the efficient representative of the best commonplace Greek taste. Cockerell, his successor in the professorship of the Academy, was the much more brilliant and accomplished exponent of the higher



theoretic level of the same school. Smirke and Hardwick, on the lower ground of mere successful business, were of still the same order of designers. Wilkins's National Gallery and University College had been produced as exemplars of what Anglo-Greek ought to be, and had failed to secure the popularity expected. Barry—whose age was under forty when he stood on Westminster Bridge staring at the conflagration of the Parliament-house, and dreaming inexpressible dreams—had designed his two Club-houses in Pall Mall in a novel mode, and had received the applause which had been denied to Wilkins. I need only add that at the newly-established Institute, Tite, as a representative of the rude energy of a prosperous commercial practitioner and an adherent of the convenient abstract eclecticism of the thorough man of business, divided the leadership with Donaldson, most indefatigable writer and speaker, to whose entranced intelligence the study of architecture was a worship, and its miraculous origin in far antiquity a faith that never could be shaken. The extreme refinement of the state of opinion which I have thus indicated was endowed with shape and purpose by the Society of Dilettanti, under whose authority the latest and most characteristic enterprise of a long series was undertaken a few years afterwards by Mr. Penrose, in his elaborate admeasurements of the optical corrections of the Parthenon, the supreme and final outcome of a system of criticism which the world can never now be at the trouble to revive.

The inevitable operation of the natural law of reaction and revolt had meanwhile been producing in many minds a feeling of antagonism to this attenuated and traditional Classic. Romanticism, in short, of the more robust order had begun to despise criticism so effeminate and so frigid. Now, English romanticism takes two forms, ancestor-worship and ecclesiasticism; and in both of these forms a change was coming over architecture. The Oxford movement, or High Church movement, or Mediæval revival—call it which you will—was acquiring force in the Church, whilst as regards the State, no sooner was it understood that a new palace of the Legislature was to be built on a grand scale, and that Sir Robert Smirke, as one of the standing architects of the Government, had been commissioned to prepare the design for it, than members of Parliament began promptly to agitate for a patriotic adoption of what was then designated the Baronial style—"Gothic or Elizabethan" was the phrase eventually accepted—and for the transference of the architect's retainer from the hands of the prosaic Smirke to those of some unknown romanticist who should be selected by means of a public competition. Barry won the prize; and at the present moment, when an enthusiastic belief in the virtues of competition has been revived, in the hope that "fair play" will cure all evils (and fair play seems as coy as ever in answering to the call), it is interesting to remember that the fairness of the selection of Barry's design was never challenged by any criticism more severe than this—that the favour of influential friends at Court had not been refused, and that the ablest specialist assistance had been wisely secured.

The adoption of this design for the new Houses of Parliament consummated the Gothic revival. The Baronial idea instantly took the fancy of the public; it formulated an innovation, allayed a disquietude, and satisfied the demands of a genuine reaction. Churches, it was true, had been built for some time in various kinds of pointed arcuation; castles also had been built for patriotic squires, even by Wilkins himself, with Gothic arches of no particular form, and some of them with Gothic cannon—cannon of wood frowning ornamentally from embrasures of stucco; cathedrals also had been restored by the help of cast iron and compositum; and London dining-rooms had been ingeniously adorned with tracery cut out of thin deal, and grained and varnished; but now all this was to be improved upon. Pugin fulminated his anathemas against everything that was spurious, everything that was pagan, everything that was modern; even the dainty engravings of Britton and Le Keux's cathedrals were supplanted by the masculine lithographs of a new school of travelling sketchers; Ruskin arose, as the prophet of a mysterious gospel unknown to the multitude; and England found itself at the commencement of an incomprehensible architectural civil war.

The contending parties gradually organised their forces. One called itself the Gothic party; the other the Classic party. There was a third, stronger than either in all but enthusiasm, which called itself the Eclectic party. At first, indeed, the Gothicists, like all originators of revolution, had to content themselves with the pleasures of hope, and to console themselves with the exercise of scorn. England is the home of compromise, and it was at length agreed that Gothic should be recognised as the proper mode for churches, Elizabethan for country houses, and Italian Classic for municipal buildings. It was agreed also that every individual practitioner should be permitted to do his best in all three styles, or, indeed, in any other he pleased, and to claim the respect of the world for so doing. Cockerell, in his Royal Academy lectures, pleaded earnestly for what he called catholicity, or universal forbearance. Donaldson, at the Institute, consented to accept the supernatural, to a reasonable extent, in Gothic as well as Greek; Tite had already actually taken a lead in Gothic design by his Scotch church in Bloomsbury; but, strange to say, Barry, the accepted prince of the practical revival, was at heart its

enemy. I believe it is quite understood that, if the Government could have been persuaded by him, the Palace of Westminster would have been built after all in the stately style of the Italian Renaissance.

I ought not to omit to mention that at this time the architectural press, as we now understand the term, may be said to have been founded. I allude, of course, to the establishment of the first of our weekly newspapers. Previously the *Civil Engineer and Architect's Journal*, a feeble monthly magazine, was the only organ of the profession, and necessarily one of very imperfect influence. The progress of architectural and engineering journalism separately, since that day, I need only say, has been most satisfactory; and I cannot help alluding especially to the remarkable development of the weekly illustrations of English architectural art, which cannot fail to be of immense artistic value throughout the world.

The year 1848 soon arrived. I need not remind you that it was a year of European revolution, out of which France, throwing off once more the embarrassments of tradition, entered upon a new and strange national career. For two hundred years Paris had been the focus of artistic culture, but of late the vivacity of the people had scarcely been seconded by the example of the Court. The Government now passed into the hands of a peculiar class of adventurous men of affairs, determined to purchase unlimited power for themselves at the price of unlimited luxury for the people. The arts do not inquire too closely into the character of their patrons; and, whatever others may have to say of Napoleon III., architects must always hold his memory in honour for the artistic brilliancy (to say nothing of political wisdom) of the architectural operations which he so successfully conducted.

English architecture had not hitherto sought for inspiration in Paris. Neither, indeed, does it now; and I venture to think it never will; for, vastly as I admire all French art, I can never divest my mind of the feeling that I am admiring something whose charms are feminine. I say, therefore, that England, the very home of rough and ready masculinity, will probably never follow the precise formulas of French taste. But it was impossible that the new start which the French were making in social display in 1849 should fail to exert an influence upon English art in one way or another. The inauguration of the great system of international exhibitions brought this influence into play; and the years 1851 and 1855, taken together, produced a crisis in English architectural history which is now seen to have been almost more notable for its results than any other incident of the kind in modern times.

When the exhibition of 1851 was opened, our professional world stood thus. The Prince Consort, now at the enterprising age of thirty-two, had become an important agent in the progress of general culture in his adopted country. It was soon understood that he had a considerable respect for architectural work, but that he had not the same regard for English architects. Perhaps this was partly due to the fact that the criticism of artistic building was in the confusion I have lately described, and that it occupied indeed what must be called low ground, a sort of unscientific squabbling ground to which a high-class German intellect might scarcely see its way to descend. Amongst the public duties which had come to be imposed upon him, one of the most prominent was the administration of the artistic completion of the new Houses of Parliament; and we may suppose him to have thus become deeply impressed with a sense of the tradesmanlike condition (if the phrase may be excused) in which he found popular English architecture and its auxiliary arts as a whole; a quality which is now candidly recognised as having been only too forcibly manifested in those days. I do not wish to attach to Prince Albert the character of a personal leader—it would be false criticism to do so; but I think he was a particularly good representative of an impending change in the public intelligence of England; and it is no doubt the fact that the very peculiar unpopularity of the profession of architects, which, during the last fifteen or twenty years especially, has been so frequently exemplified to our cost, took its rise in the early days of the Prince's intervention in architectural affairs. The standard-bearers of the day, let us remember, were Barry and Pugin, Ruskin and Fergusson, Scott—or rather Scott and Moffatt, and Donaldson and Tite at the Institute. Barry's work at the Houses of Parliament was advancing tediously and mysteriously, and a sort of Philistine grumble against it was constantly being heard in the House of Commons, as if the architect and the Legislature were not pulling together. Then Pugin, as the exponent proper of the Gothic Revival, although acting as Barry's very loyal ally in the great work itself privately, was in his public capacity simply a frantic enthusiast, whose fanaticism for the Mediæval, in season and out of season, that and nothing else, made confusion worse confounded. Of Ruskin, again, one can only say—and all the more confidently now that he has in age turned against himself in youth—that the specious, reckless, often meaningless rhetoric of his charming writings stirred up a vague and spurious sentimentalism, which, without benefiting architecture, was doing infinite damage to the architect. Fergusson, next in order, although as dogmatic as Ruskin, was as prosaic and cool as Ruskin was poetic and impassioned, and as well disposed to the working architect as Ruskin was scornfully inimical. But he cannot be said to have helped the profession, by



his very considerable services to the art, so much as he unconsciously disparaged in the eyes of the public an order of artists who required an amateur to teach them. I have next mentioned Scott and Moffatt. For the moment I do not see the great ecclesiastical designer of a later date, but only the firm of reckless public competitioners, in whose hands the abuse of a practice, always signally open to abuse, had already attained dimensions which could not fail to bring down sooner or later a dignified æsthetic profession to the level of a grasping trade. Much as I revere the memory of Sir Gilbert Scott, I feel that I should be false to my duty at the present moment if I were to hesitate to blame him, and his too clever partner of forty years ago, for their introduction of a mode of struggling for work at any price, which I believe to have done an amount of injury to English architects only less than that which, I am sorry to say, I think it has yet to do. I have spoken lastly of Donaldson and Tite at the Institute. Of Professor Donaldson, I need only say that so far as a high-minded and fearless maintenance of the lofty character of our splendid art and its literature, and of the honourable historical position of our artists, antiquarians, and critics, could defend us against assault, whether vulgar or refined, he never for an instant swerved from his duty as leader of the guild; and of Sir William Tite, although a man of very different qualities, I am glad to say, from personal knowledge, very much the same. By this time, I may add, Professor Cockerell, who never was wanting in courage to champion the cause of his order, could scarcely be called upon to be more than a looker-on.

I must now speak of that remarkable man, Sir Henry Cole, whom I regard as having taken an exceedingly earnest and effective lead in the change which was coming over English art architectural. I use this term—*art architectural*—in order to suggest to you an important practical distinction between the academical architecture of the period preceding 1851, and the non-academical *art architectural* art in general which then began to take its place—a whole galaxy of constructive, formative, decorative, and industrial arts being now in question, amongst which the pure building-art of old traditions was but the central star.

Cole had for the work of his life the advancement of what we have been accustomed to call the minor arts; and there can be no doubt that he began upon the basis of a personal dislike to the professional practice of architecture, which he maintained to the end and bequeathed to his successors. Rightly or wrongly, he seems to have arrived at the conclusion that the architect was a fossil, whose function in the streets of ancient Rome, or in the cloisters of Mediæval abbeys, or in the market-places of modern but not too modern Italy, had no doubt been a useful function, judging by the remains of his performances, but who in modern London was a doer of nothing to speak of, or of nothing but what could be done quite as well without him. As matter of business, we know this to be mere folly; there is perhaps nothing in the work of this world which the untrained intelligence can never hope to accomplish, if the proper design of a high-class building be not such a thing; and the continual endeavour of uninformed persons to do their own architecture, in spite of a thousand failures, is only evidence, indeed, of the fascination of the unattainable. Cole, however, seems never to have permitted himself, as so many do, to be an amateur architect, or even to have encouraged anyone else to be so; what he underrated was, not art, nor even business, but men. His own soul was wrapped up in detail, and he found the architects, as he thought, to be devoid of the knowledge of such detail, and content to trade upon a little experience merely in the drudgery of supervising building contractors. When he fell in with an architect like Digby Wyatt, who knew all that he himself knew, or could wish to know, of the arts of detail, and who knew also that which he acknowledged to be beyond his own reach, the whole volume of the historical art of splendid building, he could honour him, and did honour him as far as was convenient; but if the mere art of building, without the arts of detail, were alone in question, his opinion was that the Royal Engineers could manage that quite as well as anyone need desire, and indeed all the better because of one thing, that they were soldiers under discipline, and not like a good many architects he could name who were not under discipline—and whose successors, if we must tell the truth, are not under discipline yet.

The fact that the Prince Consort had built Osborne in 1848 without employing an architect (although the builder, of course, employed one) may have been encouraging to Mr. Cole when they came to compare notes; but the view of the matter which I prefer to take, as I have already suggested, is that both of these extremely intelligent and earnest men were in fact exercising shrewd foresight, and not merely cherishing a personal crotchet. At any rate, the immediate result of the Great Exhibition of 1851 was to open the eyes of Englishmen to the fact that the subtle spirit of artistic design ought to run through a great many branches of industrial production which they had been accustomed to regard as scarcely worth the trouble. That many of these were more or less related to building, or to the decoration or occupation of buildings, was plainly manifest; and the triumph of Cole was that he had laid a foundation for the popularity of the whole world of decorative arts, and, amongst the rest, the minor arts architectural. The Exposition held in Paris in 1855 carried still further the same

idea; and some English architects began to perceive that their studies must go more and more into the detail of general art. Architecture was therefore now on the move in a new direction.

### South Kensington.

Under the remarkably clever personal administration of Cole, the practical outcome of the exhibitions speedily acquired form and substance in the institution of national Schools of Design, and eventually of the South Kensington Museum. The establishment of the Crystal Palace also at Sydenham, for an artistic popular resort, ought to be coupled with these undertakings, as being a measure carried out with the same end in view. As regards architects, it was no doubt a remarkable and perhaps unfortunate circumstance that a duke's gardener had to come in to design the exhibition edifice, as if to show that it was not in artistic building alone that architects failed to keep pace with the times, but in scientific still more. We are not bound, however, to accept this view of the incident, and certainly Paxton never made his mark in either art or science.

"South Kensington," as it has long been popularly designated, in the character of a somewhat self-assertive bureau of the Government, may, I think, be described as the headquarters of art multifarious, no longer academical, but essentially non-academical. By academical art I mean to indicate, in the restricted sense, the old conventional "circle of the arts" as accepted by the Renaissance academies, comprising painting, sculpture, architecture, and no more, and all on the high level only of dignified tradition. When, for example, no longer ago than 1854, we find Mr. Tite's contribution to the Royal Academy exhibition to have been *A Composition of the Works of Inigo Jones*, and Professor Donaldson's *An Architect's Dream, or Sketch of a Design for Opening the Crypt of St. Paul's* (after the manner of the Invalides at Paris), we can acknowledge now that academicalism had reigned quite long enough. We can also acknowledge now, when we have in a great measure enfranchised the practice of the art from such inconvenient formalism, so that our Classic and our Gothic alike are often almost too free in treatment, and too demonstratively defiant of the categorical criticism of the schools, that the practical function of the architect has acquired at the same time extended limits. He can no longer rest content with having provided a building that is merely conveniently planned, properly constructed, and well proportioned, which other hands shall then clothe with decorative work, and furnish with ornamental accessories; there is finishing work everywhere, minor art work, which is part and parcel of his scheme and which he must himself design and control; there is characteristic carving, for instance, and he must direct the carver; painting, still more; there may be even set pictures and statuary sometimes; there is metal-work, glass-work, plaster-work or some equivalent, even paperhanging or some equivalent, and so on; there is floor-work, wall-work, cabinet-work, furniture-work; sometimes upholstery, carpets, tapestry; a multitude of miscellaneous fixtures and fittings, and even unfixed ornaments; all of these may more or less put in a claim to be "endowed with artistic merit" by the one designer, lest anything unexpectedly awry should mar the effect of the whole design. And this great change in the scope of the architect's work has come about, I think, in response to a corresponding change in public feeling, which must be associated with the operation of South Kensington policy. Indeed, I am almost inclined to say that the *bric-à-brac* style, for such it is, of what we call Queen Anne architecture, is properly the South Kensington Museum style. Cole personally, the paramount genius of South Kensington, was originally, as Felix Summerley, content to devote himself for ever to *bric-à-brac*. There are cynical critics who will speak of the whole Museum as *bric-à-brac* still. And I, for one, have no objection to this, if I may take leave to identify with the name of *bric-à-brac* the idea of art multifarious and non-academical, that which underlies the entire range of the minor arts, unformulated often and unconventional, but constituting an inexhaustible source of everyday enjoyment which our Academies, when inflated with the pride of empty traditions, are disposed to ignore rather than attempt to work.

But the Gothic revival, no doubt, is entitled to claim a considerable share in this expansion of the architect's work—his work, let me say, as chief of all the workmen. Pugin, for instance, was especially an apostle of the minor arts. The Neo-Greek diletantism that preceded his day, and the Georgian Philistinism together, may be said to have shut the door upon them. It was under the successors of Pugin—his direct successors in Gothic enthusiasm—that they acquired the form and force they now possess in architectural business. South Kensington could never, perhaps, have converted the narrow connoisseurship of *bric-à-brac* into an expansive public interest in every possible kind of decorative and ornamental design, but for the fanaticism, as it is called correctly enough, of Pugin and his school. And yet Coleism and Puginism were but unconscious allies, and are no better still. To this day South Kensington recognises little beyond Italian Renaissance, whereas even our Queen Anneists—themselves staunch Mediævalists quite recently—would rather have turned to anything else they could find. At any rate, the point I desire to make is this:—that the epoch of the first great international exhibitions is to be identified



in the history of English architecture with the rise of the minor arts, which have thus been progressing amongst us for about thirty years.

#### *The Gothic Revival.*

The Gothic revival must now be described for its own sake. In the language of our popular Protestantism, this great movement was simply a return to the artistic style of the Roman Catholic or Mediævalist Church, of which it has been truly said that it is "the Church of Poetry and Art." At the date of the great exhibitions Gothicism had got so far as to have acquired not only the undisputed possession of the whole ecclesiastical field in English architectural practice, but the disposition to claim whatever secular work was worth having. The theory that Italian art was only suited to Italian soil, that England required a style that was English, and that the only English style was the Gothic, was boldly advocated; and in 1857, when the Government instituted a public competition for the intended War and Foreign Offices at Whitehall, the competitors were found to be so equally divided in taste between Classicism and Gothicism that the adjudicators felt obliged to place the representatives of the two schools in alternate order for the prizes, to the number, I think, of fourteen in all, as an official acknowledgment of the absolutely equal value of secular Gothic and Classic in public esteem. We all know how in the end Scott's Gothic design was demonstratively selected for execution just before Lord Derby's administration quitted office, and the style, almost still more demonstratively, changed to Classic when Lord Palmerston came in. Such was the Battle of the Styles.

The chief merit, perhaps, to which the Gothic party laid claim was the resuscitation of the Mediæval principle of truthful articulation, or the correct correspondence of the motive of superficial design with the motive of underlying construction. The styles of the Renaissance, they argued truly enough, were almost hopelessly entangled in shams, whilst the Mediæval, they said, had nothing to conceal or to disguise. This was a great step in the right direction, for false architecture cannot be true art. It is not to be affirmed, however, that our Gothic architects quite acted up to the pretensions of their school; it was scarcely to be expected that they should; the habit of fibbing on the drawing-board, persisted in from the time of St. Paul's Cathedral (which, with all its merits, is a mass of fibs), had become inveterate in England; and even now the Spartan principle that the facts of construction shall never be compromised in the design of superficiality is much too feebly recognised.

But the Gothic revival, as soon as it had acquired its full strength, brought about another result not so satisfactory to our professional repute. Architects were now divided into two "camps" (to use the appropriate language of Sir Gilbert Scott) regarding each other with "mutual scorn." English people may fully appreciate in politics the advantages derived from the antagonism of parties, but in art they do not. Consequently, when Gothicists proclaimed Classicists to be, in plain language, foolish brothers, and Classicists said very much the same of Gothicists, the character of the whole profession was lowered inevitably, and the effect was only too distinctly apparent in Parliament and the press. Within the profession itself the authorities were divided in doctrine thus:—Gothicism rested its claims of superiority chiefly upon its qualities of honesty and masculine fortitude, which in the work of Street and some others were soon developed into something like a contempt for the graces; whereas Classicism relied upon the concurrence of all modern Europe in its adoption, and while fully acknowledging the sin of sham, deprecated the substitution of ugliness for beauty, however masculine the one might appear to be, or however feminine the other.

#### *Mr. Ayrton.*

There thus arose outside the profession a new Philistinism. Before many years it acquired unexpected importance by reason of the appointment, quite accidentally, of Mr. Ayrton to the office of First Commissioner of Works. Ayrton was a very Goliath of the Philistines, and when Edward Barry had the temerity to encounter him he went down before him in the most melancholy manner; and unfortunately he dragged us all with him, so that the unpopularity of architects became established as almost a national principle. But it is due to South Kensington to give it most of the credit, or discredit, of this consummation. Cole may be said to have hated not only architects, but all classes whatever of professional artists of the academical order. He regarded their pretensions on all hands alike as a mere traditional, conventional, and spurious self-importance, impeding the progress of those minor arts which he considered to afford the true pabulum for national taste. Accordingly, as a rule, whatever had to be done artistically under Cole must be done, so to speak, non-professionally; and, inasmuch as architecture was the most prominent of the professional arts, it was determined that, when building had to be done for South Kensington itself, the professional architect should be emphatically set aside. The military engineer was demonstratively substituted. Captain Fowke, a young officer of much general ability and of an amiable and well-disciplined nature, was made the representative of this policy. He became a favourite with the Prince Consort; he proved to be a man of large ideas;

he entered thoroughly into the new system of artistic enterprise; he made a special study of new materials for design, such as iron and terra-cotta; and he was at once a judicious chief and a judicious subordinate. He died early; but if he had lived longer he could scarcely have accomplished more than he did. His successor, General Scott, carried on his work on the same lines; but Scott, being of a more genial temperament, allowed the architectural world, if not the public, to discover at last the hollowness of the system, by acknowledging frankly that he himself was no architect at all, even although that very grand edifice the Albert Hall was nominally his personal work. But I need not remind you that, when the Albert Memorial had to be built, South Kensington discreetly made no attempt to commit it even nominally to the artistic mercies of the Royal Engineers.

#### *The Last Twenty Years.*

We have now arrived at a period of less than twenty years ago; and the condition of English architecture was this, as illustrated in the great competition for the Law Courts and the National Gallery. The Battle of the Styles was still in progress, and it cannot be denied that the Gothic party was victorious all along the line. Scott, Street, and Burges were its most prominent champions. Scott had the unassailable leadership in ecclesiastical work everywhere. But the qualities which made him so popular socially with a body of men like the clergy rendered him incapable of maintaining that militant attitude which so much better suited the disposition of his eminent pupil Street. Again and again, in obedience to the call of partisanship, and to the dictates no less of his own sincere earnestness in the admiration of what we may call the milder Gothic, Scott came forward as a combatant Mediævalist, and even made use at times of language that appeared to be strong. But no one was ever any the worse. In Street, however, the genius of the Revival possessed a soldier after its own heart. Even Ayrton had met his match; and indeed, such has been the effect produced by the architect's undaunted attitude to the very end of his life, that the lawyers themselves in high places, exasperated at the universal anachronism and anomaly amidst which they are compelled, through sheer force of this one dead man's will, to perform their uneasy business, exclaim against him with bated breath. The third of our great Gothic trio, Burges, was not so much a man of power as of a certain playful fanaticism which induced affectionate forbearance and never provoked to wrath. With his intimates he was "Billy"; I wonder if anyone ever called Street "Georgy"? But, of the three, Burges was by far the most simple artistic spirit. Scott was a laborious and pushing man of business with a congenial occupation, Street a fighting ecclesiastic, Burges an enamoured boy; one Low Church, one High Church, one No Church. But these three together represented the triumph of the great Gothic revival; and how strange it must appear to some of us that this triumph, which, like all our little mortal victories, seemed at the time so enduring, is now only an incident of history, and yet but a few years old!

By an ingenious contrivance of somebody's, the urgent demand for new Courts of Justice and the supposed desire for a new National Gallery were so combined together and made the occasion of the brace of competitions alluded to, that Gothic should have its own way with one and Classic with the other. The Classic leaders of the day, however, were neither many nor strong; all the real artistic vigour was now Gothic—romantic. The result of the contest, after the customary vicissitudes, was the appointment of Street to build the Courts of Justice in an Academic style, probably the most severely uncompromising that had ever been attempted in the world of archaeological art. The edifice has but recently been finished. It is a monument of artistic resolution, and, of course, of artistic skill. But it is much more than this. Such is the fearless muscularity of its artistic attitude, such the vehemence of its characteristic Gothic force—let me at once say ruthless violence—that without it the whole process of the Revival had been quite incomplete. But, for that very reason, the consummation at length accomplished, it was fit that the great movement should confess itself exhausted. Street died at the very goal, and his cause died with him. Except in ecclesiastical work, our modern Gothic of any high pretension is now no more; it has done its service, and done it well.

#### *Queen Anne.*

A popular successor to the style of secular Gothic has necessarily been growing up of late years by the mere action of natural law; indeed, such is the leisurely pace of architectural reform, that the new mode has been making its way slowly for more years than may be generally supposed. This is what is somewhat inexpressively and arbitrarily called by the name of the Queen Anne style, as if it were an act of mere revival. But I have suggested to you that it is really a *bric-à-brac* style peculiar to our own day, a minor art style which the influence of South Kensington may claim to have brought about, even if unconsciously. Within its own limits, and directly, no bureaucratic influence can do much in the way of producing a change of public architectural practice; it is a public demand which alone can have that effect. But it was South Kensington, as it seems to me, that created the public demand, now being satisfied by means of an.



infinitude of charming picturesque detail, chiefly appearing, however, in the design of small works. This is a much more philosophical way of accounting for the change than by attributing it to accident, or to any sort of personal authority. But Mr. Norman Shaw, whose modest and painstaking perseverance of character especially qualifies him, with the help of extraordinary dexterity of draughtsmanship, to be the unambitious agent of an artistic manifestation of this kind, fully deserves the credit of leadership; and he has been followed by a few equally brilliant men who have now unquestionably attained the status of a school, and one whose merits are becoming very considerable.

It is an exceedingly interesting exercise in criticism to inquire what is to be the outcome of this very peculiar movement. That it must gradually lose itself in a return to the universal European Renaissance, may probably be safely asserted. We must bear in mind—neo-Medievalist criticism being here altogether unscientific—that this great historical style, taken in its entirety, although often called Italian as an alternative title, was never such a thing as a merely local Italian which by accident happened to spread over Europe. It was a *Modern European* style, which took its rise on the spot where modern Europe had its birth, and at the date when modern Europe was so born. To say that it spread westward until it had overrun the whole European world as a universally accepted mode of building, and that it has been maintained in use ever since, and still is maintained for all ordinary purposes without a question being raised—except by people who are before the age, or behind it—is to describe exactly the process by which every great style of design necessarily conquers its allotted territory; and when we in England claim credit with the world, as we do, and are fully entitled to do, for the exceptional merit of having originated and carried to great perfection the Gothic Revival, as a special act of characteristic motive which has now reached a turning-point after having fully satisfied our desires, what is this but a confirmation of the principle by a most unique exception?

#### *Future Prospects of English Architecture.*

If we now proceed to look a little more closely into the future, we have to account for three styles at present in use in England. First, there is the customary style of Modern Europe; secondly, the Revived Gothic, or the style of Medieval Europe; and thirdly, a certain popular and local mode which I say differs from both but takes after both, essentially a minor-art style, and obviously transitional, prompting us already to ask ourselves what is, fourthly, to follow for a permanency?

In the first place, let us take the Gothic. Now the Gothic Revival—which, as I have already said, was a return to the whole artistic system of the grand Medieval church—*par excellence* the church of the imagination—so far as its ecclesiastical purpose extended, has not by any means exhausted itself. Architects of the type of Mr. Butterfield on the one hand, and of Mr. Pearson on the other, have, I think, a long career before them still; that is to say, Gothic churches show no sign of losing their popularity in England yet. But in municipal and domestic work the case is different, and the secular Gothic having culminated in the London Law Courts, has surrendered its claims for ever. But let me put the case in another way. The movement of national sentiment which produced the Gothic Revival—and in its particular form, I observe once more, it was peculiar to England, other nations being mere imitators—was partly ecclesiastical and partly social. It was the social phase of it which operated in 1834 in the demand that the new Houses of Parliament should be designed in what was called "Gothic or Elizabethan." This was for the sake of archæology. Up to that date, and long after, when new churches were built in so-called Gothic, this also was not for any reason properly ecclesiastical, but on archæological ground alone. The ecclesiastical motive, however, was all this time developing itself, chiefly in the Universities; and in due course it came before the general public in the rise and progress of a powerful theological party. Now we are not theologians here, but artists; and the way in which we have to look at this very remarkable social phenomenon is, I think, to regard it as an inevitable artistic reform, using the term in a very wide sense. It was the introduction of the infinite artistic element, or poetic element, into the English Church, as opposed to a dull and dismal Philistinism which had been in possession of it for many generations. We were to have for the future artistic music, artistic decoration, artistic ceremonial, artistic architecture, and, as I venture to add, artistic doctrine and discipline. This, I may safely affirm, is the harmless way in which the people at large have always looked at the case; and it is especially proved to be so by the circumstance that even the Non-conformists and the Scotch Presbyterians have accepted the new system as far as they could. I need not remind you how earnestly it was embraced by English architects; in fact, we may say that architecture has been almost the helm of the enterprise, answering to every call with a readiness of resource for which English genius may justly claim the lasting admiration of the artistic world. It is the ecclesiastical Gothic, therefore, as the style of artistic religion, that I regard to be the only natural or historical form of the Revival. That it has taken a strong hold upon the affections of the people cannot be doubted, and I scarcely care to ask you to fix a

period for the duration of its popularity. Like all other manifestations of sentiment, it must in time give way to something new; but let us hope at least that it may be something better rather than worse. Looking again at the influence of the minor arts, it must be borne in mind that, as they stand in practice, they owe almost all their present importance in England to their revivification by means of ecclesiastical architecture; so that, if it should be through the minor arts that the coming style of architecture is to be determined, there seems to be no reason why this should affect our revived ecclesiastical Gothic otherwise than by the continued amelioration of its sometimes too masculine manners, an effect which is not by any means to be discouraged.

As regards, in the next place, the exact position amongst us of the general Modern European mode, from which the French, the Italians, and even the Germans have never swerved, as we have done—except in mere superficial imitation of ourselves—I have only to repeat what I have already said, that we cannot help returning to it, and that, indeed, we are already so doing.

#### *Motive of the Queen Anne Movement.*

Turning now to our third manifestation—the so-called Queen Anne—I think one motive which lies at the root of it may be thus described. Secular Gothic had for its principal basis the element of picturesqueness; it was, indeed, frequently designated the picturesque style, as thus distinguished in spirit from the Classic style or style of repose. When, therefore, it was found that municipal buildings and private dwelling-houses designed in this manner, unless all authenticity were expressly sacrificed, proved to be unacceptable to the ordinary feeling of the day, and that, in fact, English common sense, while admiring the picturesque greatly, pronounced against the practical inconvenience of obsolete forms and arrangements, it was necessary to find something to take the place for a time of the rejected style, without surrendering the picturesque character. Mr. Norman Shaw and his colleagues have accomplished this end, as I think, successfully; and it was done by means of the subsidiary art of what I will venture to call *sketchmanship*. The Gothicists had become enthusiastic sketchers; Street was the very prince of sketchmaking out of doors; in fact, architectural sketching of the picturesque order was found to be the *forte* of Englishmen, bringing out in all its force the rough-and-ready national preference for experimental study instead of philosophical. So what was done was to make sketches of a new class of picturesque old buildings, not necessarily pure Gothic, or not even Gothic at all. I am afraid I must say that the specimens selected turned out generally to be Dutch. In a word, with the help of the good-natured name of Queen Anne, whose reign coincided sufficiently well with the use of a kind of Dutch art in England, there was at length brought about a certain popularity for red brick buildings with features neither Gothic nor Classic, but quaintly pleasing, and, so to speak, of a sort of old English type. Nothing could be better suited for such an occasion. The recent development of the minor arts, moreover, was fully recognised; for Dutch art and *bric-à-brac* are never far apart. And so the Queen Anne architects are making a very good innings, and just now are doing better and better work daily, although no doubt still leaving room for improvement. Some of the drawings of interiors more particularly, which are produced under names unknown to most of us, seem to me to evidence a degree of manual dexterity which ought to tell upon the artistic handling of a higher class of architectural style when the time comes.

What, then, is this higher style to be? I can only suppose, as I have said, that it must be the standard Renaissance in some form or other. We may now ask, therefore, whether England is to insist upon producing any modification of it to suit her own national character; and here a very interesting point comes into view. It is said that, in the history of modern intellectual development, the two races which occupy Europe, the Latin and the Teutonic, stand in this relation to each other, that the Latins initiate what the Teutons perfect. The more imaginative genius of the French and the Italians, that is to say, having its function in the origination of almost all great discoveries, it is the more practical scientific power of the Germans and English that assumes the task of their development. If this be true with reference to the arts, England in the coming generation may be destined to take the lead of even France; and I for one have no objection to look this possibility fairly in the face. Already the Ecclesiastical Gothic of England in our own day may certainly hold up its head beside anything that France has done; and perhaps in the coming Renaissance we may find ourselves no less able to compete with our gifted neighbours. Bright and joyous as the French Renaissance always is, there may be a certain vigour of manliness reserved for the English, which, in an age of increasing manliness and increasing English influence, shall accomplish unexpected results. It is of little use to speculate about the mere details of one academical style or another, and the introduction of this class of features, and the rejection of that, as if personal authority were to govern the course of events; natural law will have its way in this as in all else, and if English intellectual enterprise is to be fairly challenged to accomplish an adaptation of the somewhat hard-worked forms of the Italian-



European, I do not see why in the next century an *English-European style* should not take the lead throughout the world.

#### *Present Aspect of the Movement.*

Let us further inquire what is the present drift of English architectural sentiment in the abstract. The Mediæval romanticism which a few years ago was the dominant feeling has recently been disappearing with such a strange rapidity that it seems almost doubtful whether the secular Gothic party have not deserted to the enemy in a body. Now, I confess I should be sorry if this were really so; because I think the peculiar artistic enthusiasm which actuated Pugin, Scott, Street, and Burges, cannot well be dispensed with for some time to come. No doubt a new enthusiasm will spring up; but the Queen Anne movement is not such a thing; it is an impulse of a much more feeble and evanescent character. The attitude which is assumed by the somewhat mysterious organisation of "The Society for the Protection of Ancient Buildings" seems for a moment now and then to be all that is left of the Gothic enthusiasm; but on closer acquaintance this impression is not confirmed. For it declines emphatically to be considered representative of Gothic alone, or, indeed, we may say, of Gothic at all. Its object is not even artistic, but historical; to preserve what is left of the past in the most indiscriminate way; whether good or bad, old or new; preserve it all, so that the reverie of the wayfarer may have not only something authentic, but everything veritable to dwell upon, even when the light of life, perhaps never a very bright light, has quite gone out. This, I need scarcely repeat, is not an enthusiasm of art, indeed, scarcely one of archaeology; and it has become identified with architecture only because buildings are the most conspicuous relics for such a form of patriotic reverence. I may add, moreover, that the influence of archaeology itself upon architecture seems within the last few years to have given way; and I think this is to be regretted too, inasmuch as our archaeologists, like our old antiquarians the dilettanti, if only as matter of prestige, brought the element of learning into prominent connection with our noble work. The minor art architecture of to-day exhibits again in these respects its conformity with the South Kensington principle, which, in making art a thing of popular skill, and not of academical knowledge, widens the ground that is cultivated, but at the expense necessarily of the depth of cultivation. That our present age is one of superficiality in many other matters besides this, is a well established fact; and I am not sure that it is to be regretted; for if we can see that the field of art, as actually enjoyable by the multitude of us, is thus being extended so largely, we may well be content to let the learning reappear in its own way and at its own time.

#### *Influence of Draughtsmanship.*

But there is another point to be noticed here, namely, the way in which the architectural arts are being controlled and even directed by the artifices of draughtsmanship, or sketchmanship, regarded as a delightful, but delusive, sleight of hand. In the minor arts of decoration, such as glass-painting, carving, painted ornament, and so on, it is easy to see that clever drawing is in a great measure the essence of the artistic manifestation; but we cannot shut our eyes to the fact that in the now very pleasant work of furniture design, when in the hands of architects, the same clever drawing is fully accepted in the same way; and, as matters go, it is but a step in the style of the moment from furniture to building. Our architecture has thus come to be sketch-designed and sketchy, careless and vague in detail; a thing of scene-painting, picturesque at any price; restless and not necessarily anything else; exceedingly clever on paper, and, when carefully carried out, pretty and piquant in execution, but greatly wanting in the nobler qualities. I do not suppose, however, that this will last long; and, even before the so-called Queen Anne mode itself gives way, we may expect, I hope, to see a more careful manipulation of the modelling becoming universal; indeed, it is already making progress.

#### *Mr. Ruskin.*

Another matter of sentiment to be noted is the abatement of that cynical poeticism which was introduced by Mr. Ruskin. I never could understand why this exquisite dream-painter should have ever taken up such a subject as architecture, except for the indomitable courage of the thing; but there can be no doubt that his visionary doctrines—and the more visionary necessarily the more vague—have had a great effect in helping what was weak English art to conquer strong English Philistinism; and, if this involved a certain amount of inconvenient romancing when applied to the practical work of architects, such a result might be expected to appear, and the effect of the medicine must be allowed to wear off by degrees. At all events, now that the artistic spirit has taken possession of us, we need not grudge our thanks to the influence, perhaps upon the public mind more than upon the professional, of the writings of Ruskin.

But we have nevertheless still to face the fact that in high places in England a new Philistinism has been for many years acquiring a certain force—indeed for thirty years—an influence antagonistic both to architecture and to architects. The building of the Houses of Parliament in a Gothic style was no sooner fairly under way, than the common sense of the more utilitarian order

of men connected with the Legislature revolted against it as an anachronism. The architect of the structure, even if he himself had been at first of the same opinion, had of course to take all the blame; and, when the edifice came at length to be occupied, there was a cry raised of inconvenience and incongruousness, which has been kept up ever since. In course of time, when the son of the great architect, thinking he had acquired by his father's bequest the position of a hereditary successor, came into collision with Mr. Ayrton, and was ruthlessly defeated by that champion of the Philistines, backed by the unsympathetic logic of the courts of law, it would be idle to affect not to see that the pretensions of architects—the Prime Minister himself had to say they were untenable—had come to be seriously distrusted. The immediate effect of it was that the Government determined to dispense with outside architects by making use of the officials of the Department of Public Works; and it is still understood that this rule is practically in force for a permanency. The charges made against the profession on this ground are shortly these:—that convenience and economy are sacrificed to monumental appearance, and that the severe character of the commercial contract with a builder is tampered with by the introduction of extras. Upon these questions I need only observe that the most successful architects in England from time immemorial—I do not say the most artistic—will be found to have been the most mercantile in their manners; and, secondly, that the artistic element in architecture is not recognised by law, or recognisable in any way by the legal mind. I may also point out that the typical English gentleman—and typical English legislator—is a person whose ideas of building are still of primitive simplicity, and that his impression of an architect's business is equally devoid of sentimental considerations. But I do not consider that the so-called unpopularity of architects goes really deeper than this; and if any architect who happens to obtain Government employment—scarcely ever a desirable thing, by the way—will condescend to bring his ambition down to the practical level of his private business, and to do everything in strictly commercial form, there is no reason why he should not give satisfaction.

#### *Competitions.*

One word more must be said here upon the influence of competitions. Looking at the eagerness with which these contests are entered upon, the disregard of commercial calculation that is manifested even by the leaders of the profession, and the unseemly bickering that invariably results, how is it to be expected that such men as are at the head of public affairs in a commonwealth of commercial common sense like ours should regard either architecture or architects with due respect? The logical conclusion obviously is that the designs which are so freely offered for nothing must be worth nothing, and that the men who are so ready to work for nothing must be taken at their own valuation. Nevertheless, although I believe it is almost invariably the case that it is not the proprietors that call for a competition for their own sake, but the architects who virtually solicit permission to compete against each other, I am afraid, in speculating upon the future of the profession, we must expect this practice of competing to increase rather than diminish. Sooner or later, however, some check must be put upon it, either by the good sense of the public, or by a feeling of shame on the part of the architects themselves: up to the present moment I do not see that any effective steps whatever have been taken towards that end. Still, on the other hand, I cannot but frankly acknowledge the opinion that, without the peculiar artistic exercise and enterprise which competitions induce, English architecture could not possibly have done all it has done during the last half century. I chiefly object to the great waste the practice occasions, not only in money, but in time, temper, and character.

#### *Position of Architects.*

I may now say a few words—still keeping to the artistic view of my subject—upon the position of architects in respect of business. I need not repeat in any way what I have said of the advancing popularity of minor-art architecture, and the increasing competency of our architects to deal with it. But what of the still more rapidly increasing numbers of the men who have to live by it? And what is the state of their organisation?

In the first place I may express my opinion that the Institute of Architects, established now 50 years ago under circumstances very different from those of the present day, does not display either the vigour or the intelligence which the service of the profession requires, whether we look to the interests of the art or to those of the artists. It is to be hoped that something may be done in that quarter before long; but it must take time; thirty years hence, at any rate, the Institute, we may safely say, ought to be much more earnestly devoted to the practical utilities of art than it is now.

The Royal Academy, also, if architectural art is to retain its connection with it much longer, must, I venture to suppose, enlarge its views of the minor arts considerably; and here I think we may fortunately expect to see both painters and sculptors entering into the matter with understanding as well as with sincerity.

Turning next to the educational question, we find that exami-



nation tests are becoming the order of the day; but whether, in respect of architecture, the introduction of artistic design into the programme can be accomplished, seems still to be matter of doubt. That some kind of academical diploma for art-architectural in its expanding form must, however, sooner or later, be contrived, both to conciliate the artist and to meet a public demand, can scarcely be matter of doubt.

A circumstance that must not be overlooked is the still-increasing employment of professional architects all over the country, which, looking at the sum total, is so far encouraging, even if individual instances of dissatisfaction are numerous. Not many years ago there were but few architects of really good position, except in London and the larger provincial towns. Now the smaller towns, and some that are almost villages, are occupied by practitioners who are frequently quite equal to their metropolitan brethren in skill. The pupils also of provincial men have in some instances better work passing through their hands than those who are in average London offices; and, thanks to a study of the photo-lithographic illustrations of the professional journals, their draughtsmanship is often of quite as high an order as the best in London. All this points to a condition of things in the near future throughout England in which men architecturally educated are to do a vast amount of good art-work in one way or another, and therefore in many ways. Consequently, when I hear the question asked, as I often do, what is to become of the increasing host of young architectural pupils, my answer is that they will be drafted off more and more before long into the service of many charming arts. For there is a certain peculiar characteristic in architectural training—namely, the habitude of constructional design—which, even while as yet not so devoid of the old make-believe as we could wish, is still expressly calculated to prepare the mind for that association of the superficial with the substantial which becomes the most essential charm in all formative and ornamental art when once publicly understood, and which the mere counting-house designer acquires, if at all, under great disadvantages.

#### *Engineering Architecture.*

Another point of importance in our prospect of the next generation of architects is the work connected with so-called engineering construction. Perhaps the most regrettable weakness of English architects at the present time, in point of dignity, is their want of that higher scientific skill which they allow engineers to monopolise. To give a familiar instance, it is quite common for an architect of eminence, when he happens to have ironwork of any magnitude to deal with, to hand it over altogether to an engineer to design, like a solicitor employing counsel to draft a deed. Now this is to be regretted. The reason for the practice obviously is that there is no sufficient current of such work passing through the architect's own hands to keep him up to it, and that he therefore must call in a specialist who does nothing else. It would be useless, and indeed unfair, to reject such an argument; but what I want you to do is to consider what a far superior position the architectural profession would occupy if it were publicly understood that they did all such work for themselves, even if the fact went no further than this—that the aid came from a specialist architect and not from an engineer. Still looking at art, what I should like to see is an architecturally educated man designing such a thing as the most advanced ironwork, and introducing true architectural art into it as his design went on. Otherwise, if one of these two kindred professions has to call in the specialist aid of the other, why should it not be the engineering constructor who calls in the architectural designer? Why should all our building operations of the so-called, and improperly so-called, engineering order—viaducts, bridges, great roofs, railway stations, piers, embankments, and much more—be left barren and unfruitful of grace because the designers of them, professing nothing of the artistic spirit themselves, assume that it has no connection with their work? Here, I would fain hope, we may see another sphere of business, and indeed one of vast importance and grandeur, opening out in the next generation to the English architect.

#### *Conclusion.*

To conclude, in answering for yourselves the question what is to be the position of English architecture, let us say, thirty years hence, I invite you simply to regard the profession as one that has been advancing during a corresponding period of the immediate past in a certain direction and at a certain pace which a retrospect of recent history such as I have offered seems to indicate clearly enough, and then to follow forward the same line at an increasing rate of evolution. If the next thirty years should do as much as the last fifty have done, then it becomes easy to understand that the process of development would have to cover as much ground as has been covered since the time of the foundation of our Institute and the inception of the design of the new Houses of Parliament, in the old-fashioned reign of King William the Fourth. We do not require to imagine the occurrence of any catastrophe; but the change produced upon the face of our art and our profession must undoubtedly be great, and perhaps may be greater than any argument such as mine suggests. For, during the last fifty years, Dilettantism has gone down before the Romanticism of the Gothic

Revival; and this in its turn has at length given place, after adding a very glorious chapter to the history of the art, The old Philistinism of the Georges has been vanquished by the South Kensington movement, as a movement of the people; and a new Philistinism has arisen, which has to be vanquished, and will be, in due time. The empty conventional formulas of the academical arts have been vigorously assailed by the new non-academical substantial facts, and the minor arts are already so far triumphant before the common sense of England that architecture itself has taken service in their cause, and a great deal for the better if a little for the worse. In these campaigns the whole lives of such great men as Pugin and Barry, Scott and Street, have been expended, and the task of great writers like Ruskin and Fergusson exhausted. Cole has passed through his long and busy, masterly and masterful career. The genial influence of Prince Albert, infinitely beneficial to the artistic sentiment, has already survived his own august life for three-and-twenty years. This artistic sentiment has for the first time spread all over our country, one of the kindest graces of the splendid Victorian age; and England is now ready to enter upon a new chapter of her magnificent history, not, let us hope, with arms in her hands, whether for conquest or defence, but with the fruits of science and the flowers of art. And possibly—indeed, I venture to think not improbably—it may be the destiny of England at a period by no means remote, in the development of the advancing scheme of Anglo-Saxon civilisation, to assume a leadership—such as she already possesses in so much besides—in the illustrious art which it is the pride and the joy of this assembly to represent.

#### *Discussion.*

Mr. BERESFORD-HOPE, M.P., said that he had certainly passed a very interesting space of time since their good friend, Professor Kerr, began his paper. Like the chairman of the evening he anticipated a prophecy, and instead of a prophecy he had a retrospect. Now he thought Professor Kerr showed great wisdom in that. There was a good saying—he believed it was an American one—that Sir William Harcourt brought up the other day in the House of Commons, when he was run into a corner. He said that he never prophesied unless he knew. Professor Kerr had said a great many things very cleverly and very epigrammatically. With some things he agreed, with others he did not; but to traverse his paper from first to last would be an impossibility with any due Christian charity to the nerves and spirits of the parties he had to address, so he would let many things pass. He would even admit that which was the greatest swallow—the words he said in praise of that adventurer the Third Napoleon. He was sure Professor Kerr, when he looked over his paper, would see that he began with a much too magnificent philosophy. He had to leave it as he went on. He began with a very magnificent picture of art as a course of successive evolution, successive development and improvement, and the whole result of his paper was that, instead of a development or improvement, it was a constant going forwards and then going backwards, and then going round, and then going to the left and then to the right, and such he believed it was. All of them, he thought, as they grew older—though he trusted they would never get blunted in their feelings—got more moderate in their hopes and expectations, and when they had a success, thankful as they might be for that success, they learned to regard it as a new earnest that the march of victory would be progressive, and that they would rise from height to height. Equally they learned when they had a rebuff, that rebuff might be only a transitory puff of a change of the mind, and it might be even a prelude to some unexpected success afterwards or a very salutary training in points in which they were too exuberant, too self-confident, too intolerant. He thought Professor Kerr would not expect him to disagree with him. He did thoroughly agree with him in the picture he drew of the dreary and prosaic period which elapsed between the epoch of the great man Wren and the revival of our age, and in saying that word he separated himself from that school which a few years ago was the accepted orthodox Classical school in this room and elsewhere; still even at that time there were attempts, there were great anticipations, there were scintillations of development which came to nothing, but they showed a divine spirit of originality which was still born in the architect's soul. There was one man he would always quote as being misunderstood—he meant Nicholas Hawksmore. He believed in Nicholas Hawksmore there was much of that type which had been more completely developed in their days, but which was overlaid by the pedantries of the day in which his lot was cast. Professor Kerr went on to say action and reaction. There he thoroughly agreed with him. It was action and reaction, but he thought reaction was hardly consistent with the idea of perpetual progression. The paper had mainly dealt with a period of twenty or thirty years, and in that period of twenty or thirty years great chronological accuracy was desirable, and he thought Professor Kerr, in yielding to the temptation of some striking parallelisms, had rather forgotten that. He might point out that, although Pugin had a court in the exhibition of 1851, it was but the song of the dying swan. Pugin died the year after, in 1852. He thought the progressiveness of the different schools ought to have been differently associated. He said so with some personal feeling, having early in life been associated



with men who might have been, like the conies, feeble folk; still they were men who, in their feebleness and wilfulness, did try to hold up the standard of truthfulness, and did hold up the standard of applied art. That was the school of the Forties. He had reached the time, he thought, when mock modesty would be wronging the dead as well as the living, for in the Forties the torch was lighted of architectural truth and of applied art, which popular mythical history would assign to the Fifties in South Kensington and elsewhere. He did not say they were unpopular, but they had not the *chic* to gain general popularity. The movement was the movement of a few people much spoken against—South Kensington, with the *éclat* of the Exhibition, with the Royal patronage, with the magnificent advertising genius of his friend Henry Cole—he would call him his friend, for he had gone to his rest after their many quarrels—but the movement began much earlier, and there were men who were too much forgotten now. There was one whom he would name particularly; he died early, but in Richard Carpenter there was a great genius whom the world did not fully appreciate. If Professor Kerr resolved his paper into a book, which he thought he was bound to do, he must go further. He was bound to illustrate it, he was bound to develop epigrams into paragraphs, and paragraphs into chapters, and he thought if he would study a little more, if he would not make those aphorisms and parallelisms and those rough-and-ready chronologisms, he thought that Pugin would be found to have been a man of earlier date than he assigned to him, the Classical movement would be found to have a distinct position which he had not done full justice to, and Mr. Ruskin would be found also to belong to a later date than Professor Kerr assigned to him. While he had had a great effect on many people, he thought it could be conclusively proved that most of the Gothic enthusiasm of the day was previous to him, and that he was adopted and accepted with open arms as a great ally—as a Gordon who had come to rescue the garrisons from the Goths; but these garrisons were already in arms under the Gothic standard. So, too, as to South Kensington Museum. As to the influence of Mr. Cole, he thought it would be found he was not the great leader of men that was thought, but a very clever *entrepreneur* who had availed himself of men who had already started on their career. Take Mr. Crace, for instance; he would, no doubt, be quoted as a model South Kensington man, but was he not a creation of Pugin? After all, Sir Henry Cole's work was a brilliant and a sparkling work, but it had died with him. As to the influence of archaeology on art, he was a little puzzled at Professor Kerr saying that he thought the influence of archaeology on art was failing. He should have thought it was quite the contrary; it might have been queer, misguided, niminy piminy. Surely the relation of archaeology to art during the last fifty years was not decaying, but if anything it was running to seed and to a wild exuberance. Gothic was condemned for municipal buildings. That he did not admit. Neither did he admit what Professor Kerr said very cleverly of sketch-making having beguiled the attention of mayors, aldermen, and common councilmen to breaking out into enormous Queen Anne. But after all, he gave mayors, aldermen, and common councilmen the credit of good sense, and he did not see at all why in ten or twelve years hence a building of Burgundian Gothic should not be adopted for some town hall, of that most prodigious and gorgeous Queen Anne which was embraced in all its arms by the municipality of Leicester many years ago. He forgot who was the promoter of that; but it was a very picturesque in fact it was, Queen Anneism. Art in Holland was by no means a contemptible art; it had made a great mark in Europe. Gothic, he heard, had done its work. That, again, was an opinion. Mr. Fergusson adopted an architecture by which his manner was generally known. He was first known by his book on the topography of Jerusalem. That was a topographical book which had nothing to do with the general history of architecture; but his "History of Architecture," he thought, appeared in the Fifties, after Pugin was dead and gone, and after the Exhibition of 1851 was dead and gone. Fully admitting Mr. Fergusson's power, and the great work he had done, he must rather claim he should be reckoned in the second than in the first generation of those who created the first architectural institutions of their time. They heard that in the Law Courts, secular Gothic surrendered its claims for ever. That was a magnificent sentence; but if he were to say ecclesiastic Classic surrendered its claim for ever, one would be just as true as the other. It was infinitely too magnificent and too epigrammatical to be capable of truth. He did not go in for "for ever;" he only went in for twenty years. Now he came to another matter, which he was rather sorry to hear, for it did not occur to him to be just, nor did it seem to him to be logical. It was that Mr. Burges was deficient in power because he was called "Billy." No doubt Mr. Burges was christened "William," and undoubtedly if he had been christened Richard that might have led to his being called "Dick"; but, whether he were Billy or whether he were Dick, he was rather surprised to hear Professor Kerr predicate that want of power in the great genius—for he was a great genius. He always felt it a moral and artistic duty to stand up for him. In his great good-nature, in his *bonhomie*, and his extraordinary fun and wit, he very often did not do justice to himself. He was too real and natural himself to pose for posterity, therefore posterity must stand

up for him, and say that this laughing chaffing fellow was a man of great power. He might tell them an anecdote that occurred during the competition for the Law Courts. He, Mr. Hope, knowing what sort of fellow he was made him promise to abstain from any jokes. Meeting him, Burges said: "I have been very good; the only joke I made was to put the Recording Angel over the Record Office." One day he was looking at Burges's drawings when a friend came in, and, flicking the drawings, said, "I would not mind being beaten by those," and the man who said that was Street. Burges's drawings were a noble set, and it was a great credit to Street to have had the Law Courts assigned to him with such a magnificent series of drawings as Burges's in competition. In conclusion, Mr. Hope said that the whole paper was a very brilliant one and a good-humoured one, and, above all, it was, as Professor Kerr had said of the future of ecclesiastical Gothic, and, as for the other, it was a recantation—not at all complete, but still a recantation quite sufficient for him, and very refreshing—of the old doctrine of the Donaldson and Cockerell and Basevi school.

Mr. J. P. SEDDON proposed a vote of thanks to Professor Kerr. In the matter of prophesy, the magnificent mountain had brought forth only a mouse. The whole history of architecture, and of what Christian architecture had done, was simply ignored, and they learned that the style of thirty years hence would be but another version of Queen Anne. That was a very lame conclusion to come to. He could not believe in the decay of Gothic, seeing the voluminous examples given by the press of Gothic work being carried out in all parts of the country, and seeing that the young architects were more than ever studying the principles of the Gothic style. If there was anything good in Queen Anne, which it was said had superseded Gothic, every atom of its goodness was Gothic. In Mr. Norman Shaw's work, with the exception of the crinkle-crinkle work, it was Gothic. Queen Anne style was but a step or two removed from Renaissance; it only wanted a little more false art to make it quite Renaissance. The grand Gothic principles of proportion could never be put aside or ignored, and, if they wanted to know how the minor arts were thoroughly welded into architecture, they must look back to the past ages of Gothic for it.

Mr. AITCHISON seconded the vote of thanks. With the conclusions Professor Kerr had come to on many points, Mr. Aitchison said he agreed. Though no one could be a greater admirer of Gothic than he was, no one could help seeing that at present it had ceased to make the slightest progress. What was called Queen Anne had been to a great extent a return to a form which the nation, and all nations of Europe, were more accustomed of late years to use, put on to the irregularities of Gothic form. What they had to look forward to was that material which had really had more to do with the extinction of Gothic than anything except painting and sculpture. One of the great things about Gothic was that it was an adaptation of art to new forms of construction, and that gave it its vitality, and spread it throughout the world. It solved problems of construction which the ancient Romans could not solve with all their power. Nowadays these problems had mainly ceased to be carried out except in iron, and in iron they would have to look for one of the great arts of the future, and, as he believed, it would become the architecture of the future. If it were to form an architecture that would not simply be construction, architects must learn the art of architecture in iron.

The CHAIRMAN said that Professor Kerr had touched on the question of competitions in the future. He (the Chairman) wished to say this word in regard to the position he had taken up towards the question, and it was to say that he had never at any time expressed an opinion either for or against the system. He was rather against the system as a matter of fact; but as regards his action his aim had been to try and improve matters, and secure that they should be conducted as fairly as possible.

The vote of thanks was then passed unanimously.

Professor KERR, in replying, said that he was very much obliged to Mr. Beresford-Hope for the dissertation with which he had favoured them on his paper. In old times, in the battle of the styles, he was on one side and Mr. Beresford-Hope was very emphatically on the other side; and as Mr. Hope told them that he had recanted of the thought he then entertained, it seemed to him that he (Professor Kerr) was right, because he had now taken a *via media* which Mr. Hope recognised, though he would not admit it. But the *via media* was a diagonal induced by two forces. In fact, during the last twenty years he had got a little wiser, and Mr. Hope had not.

Mr. BERESFORD-HOPE: Speak for yourself.

Professor KERR said that at all events he was much obliged to the meeting for the patience with which they had listened to him. He was perfectly satisfied with the criticisms which had been delivered, and with which he agreed entirely.

Mr. DYCE CAY, C.E., has prepared plans for the extension of Arbroath Harbour, at an estimated cost of 150,000*l*. The scheme includes the construction of two breakwaters, each about 2,000 feet long, carrying out the entrance into deep water, and enclosing the present harbour works.



## SALE OF NOTABLE PICTURES.

ON Saturday last Messrs. Christie & Manson sold at their rooms a collection of pictures, one having a romantic history. The picture is known as *The Monarch of the Glen*. It was painted by the late Edwin Landseer, R.A., for the refreshment-room of the new House of Lords, and was tendered to the Fine Arts Commission at the price of 300*l.*, and was rejected. Sir Edwin received a note from the secretary stating the fact of the rejection of the picture, and requesting him to send for it, as it was in the way. Sir Edwin was indignant, not only at the insult in rejecting his picture, but also at the curtness of the note demanding its removal. This was in 1851, when any painting by Sir Edwin commanded a ready sale at much larger prices. The picture was at once sold to Lord Londesborough for 800 guineas, and the copyright to Mr. Henry Graves for 500 guineas. The picture has not been seen since it was in the old rooms of the Academy in Trafalgar Square, as it was not obtained for the special exhibition of Landseer's works after his death, formed at Burlington House in 1874. But it is so well known by the masterly engraving by Landseer's brother Thomas, that scarcely a word is wanted to describe the beautiful subject. It is enough to say that a noble stag, crowned with his twelve tines, stands among the clouds on his throne of rock and heather, proudly rearing his head in the mountain air, breathing defiance to all rivals and all enemies. His quick ear has caught a sound, and he seems with those wide open nostrils to scent some danger from afar. The picture was painted with all the fire of Landseer's best moments, and he did it as a test piece of his powers, for it was intended to fill a panel, which explains its square form, in the House of Lords, in those days when it was thought feasible to find pictures by English artists worthy to decorate the National Senate House, and when our leading painters were invited to offer works suitable for the purpose. On Saturday it was bought for 6,510*l.* by Mr. Eaton, M.P., who bid for himself and led a gallant contest with Messrs. Agnew. The picture is in as brilliant condition so far as colour goes as the day it was painted, but substantially it is covered with those serious expanding cracks inevitable to the method which Landseer persisted with many other painters of the time in using. As to the price now obtained for it, it is interesting to recall former great prices of which this is a very close rival. The famous *Otter Hunt* sold in Baron Albert Grant's sale, 1877, for 5,932*l.* 10*s.*; the chalk drawing or cartoon of a *Stag pursued by a Hound*, in Mr. Coleman's sale, for 5,250*l.*; and the *Well-bred Sitters*, 5,250*l.* *The Bears*, in the same sale, brought 6,615*l.*, the highest paid at auction for a Landseer, but not the highest paid, for we know that Lord Brownlow's famous *Titania*, so beautifully engraved by Cousens, was recently sold through Messrs. Agnew for 7,000 guineas to Mr. Quilter. As much as eight or ten thousand had been named as the probable price of *The Monarch* before the sale, and it has since become known that Mr. Eaton was prepared to advance very considerably above the sum he has now given for the picture.

## THE EDINBURGH ARCHITECTURAL ASSOCIATION.

UNDER the conductorship of Mr. Archibald Macpherson, architect, the members of this society visited Dalhousie Castle and Newbattle Abbey on Saturday afternoon. Dalhousie Castle was reached about half-past two, and, after viewing the exterior of the baronial pile, the party proceeded to the hall, where, in the course of a short paper descriptive of the castle, Mr. Macpherson said that from the plan of the buildings—which offered the most reliable evidences of antiquity—they were able to identify the outline of the present edifice as almost precisely that of the outer defences of a stronghold of the thirteenth century. It presented then the appearance of a fortified court, more or less square in form, surrounded by massive walls, crowned with machicolated battlements, and further defended at one angle by the massive round tower still existing. There was reason to believe that a similar tower at one time stood at another of the angles. These towers commanded the approaches to the barbican. Other smaller turrets were to be found at intervals along the battlements; while within the court fronting the barbican stood the donjon and keep. It was probable that in the sixteenth century the keep or house proper was greatly modified, and that in the seventeenth century other changes were made, the main body having by that time assumed the form of the letter L, which was characteristic of the houses of the time, especially in the vicinity of Edinburgh. The castle was burned down about ten years ago, and further additions and alterations had been made since then. Proceeding by way of Dalhousie Gardens, the party reached Newbattle Abbey about four, and there a short and extremely interesting paper on the Abbey was submitted by Mr. Macpherson. He stated that it was at one time a Cistercian monastery, founded in the twelfth century. The excavations made by the directions of the present Marquis of Lothian six years ago laid bare the founda-

tions of the church and a portion of the walls of the conventual residence. From an examination of the details thus found, it was evident that there had existed from the date of the foundation a church of transitional character, and that, having been destroyed by fire, it was replaced by one built in the fourteenth century. That theory was fully corroborated by the fact that Newbattle shared the fate of the other churches when in their inglorious expedition Richard II. of England and his uncle John of Gaunt destroyed churches and abbeys, but left the castles intact. The church, which consisted of nave with aisles, short transepts, and square-ended apse, measured from east to west 239 feet in length, 57 feet in breadth, including aisles, and 113 feet in breadth across the transepts. It nearly equalled in measurement its mother house—Melrose. A few interesting facts about the mansion-house were also given. Votes of thanks were passed to the Marquis of Lothian and the Earl of Dalhousie for permitting the Society to visit their residences, and to Mr. Macpherson for the valuable information he had submitted.

On Monday evening, at the usual fortnightly meeting of the Association, Dr. R. M. Ferguson delivered a lecture on "Electric House-fittings."



Viollet-le-Duc.

SIR,—I hope you will favour me with space in your columns to express my deep sense of indebtedness to the Council of the Royal Institute of British Architects for allowing me to take part in the Conference of last week, and also to thank the members as a body for their more than kind reception of my paper on "Viollet-le-Duc."

No fitter place or audience could have been found for some mention of the genius and work of a man who was one of the last to say a word in praise of himself. I know that Viollet-le-Duc held his English compeers and British architects generally in high esteem; and he never forgot that he was the honoured recipient of the gold medal of the Institute, which is now among the treasured heirlooms of his family.

It would require not one, but half a dozen papers to give an adequate presentment of his capacious intellect, but my main object will be served if I should in any way be the means of inducing the younger members of the architectural profession, not merely to copy his drawings, instructive and beautiful as they are, but to study writings so pregnant with practical suggestions.

I received a fortnight ago a letter from his son expressing his regret that it was not in his power to send for exhibition at the Conference a collection of the more important of his father's larger drawings, which are no longer his, but the property of the French nation, and are now being arranged for permanent hanging in the Salle Viollet-le-Duc at the Trocadéro, adjoining that fine museum of French historical sculpture which owes its origin to him, and was the latest fruit of his prolific life.

Yours obediently,

West Grange, Stroud:

CHARLES WETHERED.

May 12, 1884.

P.S. In my paper for "Mr. Hamilton" read "Mr. Hamerton," and for "M. Baudot" read "M. de Baudot."

## Competitions-Memorial Committee.

SIR,—We enclose a copy of a circular which we intend forwarding to the promoters of any competitions we may hear of. We trust you may find space for this in your journal.

Yours obediently,

(Signed)

COLE A. ADAMS,

ASTON WEBB,

} Hon. Secs.

14 Holden Terrace, Grosvenor Gardens, London, S.W.:

May 13, 1884.

GENTLEMEN,—The committee appointed by the Royal Institute of British Architects, with a view of impressing upon promoters of competitions the importance, both in their own interest and in that of the architectural profession, of appointing a professional assessor of established reputation in all cases to advise the committee of selection on the designs submitted, having heard that you propose to obtain designs for your new building by means of a competition, beg respectfully to urge upon you the appointment of a professional assessor to advise you, for the following reasons:—

Because it requires the knowledge and skill of a specialist of great experience to weigh the merits and demerits of rival designs, and to decide on their suitability for their intended purposes and for the site.

Because designs are unfortunately often submitted in competition which are in violation of the conditions; while others, if executed as designed, would largely exceed the sum at the disposal of the promoters; while, again, a design in many ways inappropriate for the purpose may be submitted. In all such cases professional advice would be invaluable to promoters, saving them from possible litigation, and from incurring



unnecessary expense, or the lasting inconvenience of erecting a building unsuitable to its purpose.

Because the not unnatural tendency of an architect competing for a building is often to underrate the cost of his design, while a professional assessor approaches the question in a more impartial manner, and his judgment is therefore more likely to be the right one. He will also better be able to gauge from the designs (an all-important matter) whether their authors show competency in design, general arrangement, and construction.

Because by the appointment of a professional assessor you will not only be assisted in the selection of the best designs, but you will also enable many good men to compete who would not otherwise be able to do so.

Because the number of architects agreeing not to take part in any public architectural competition, unless one or more professional assessors of established reputation are appointed to advise the promoters on the relative merits of the designs submitted in the competition is upwards of 1,350, and the list contains the names of most of the best known men in the profession. Such an expression of opinion will, it is hoped, have weight with yourselves and other promoters, who are frequently placed in an invidious position by the powerful influence which may be brought to bear by unscrupulous competitors, and by other means, where there is no assessor, which would be to a very great extent removed by the appointment of one.

Because promoters would find great advantage in securing the services of an assessor, as an initial step, to assist in drawing up the conditions of the competition, and announcing his employment when advertising the same.

This committee does not attempt to advise promoters on the selection of an assessor, but would refer them to the President and Council of the Royal Institute of British Architects, 9 Conduit Street, Hanover Square, London, W., or to any well-known architect of established reputation, not necessarily a member of the Royal Institute of British Architects, who is not a competitor.

The selection of an assessor or assessors should be to a large extent governed by the nature of the proposed competition, the object being to obtain the services of men most conversant with the requirements of the class of building contemplated.

The suggestions for the conduct of architectural competitions, published by the Royal Institute of British Architects, which are enclosed, will be found very useful for the guidance of promoters, but this committee does not recommend the double competition system when the amount to be expended is under 20,000*l*.

We remain, gentlemen, your obedient servants,

COLE A. ADAMS, } Hon. Secs. of the  
ASTON WEBB, } Committee.

#### Stock Exchange.—East Addition.

SIR,—Referring to your notice in last week's issue of the Conference of Architects' visit to this building, you will oblige by stating that the Pavonazetto and other marbles, including chimney-pieces, were supplied by us, and we are also executing the carvings, exterior and interior.

Yours, &c.,

FARMER & BRINDLEY.

67 Westminster Bridge Road, London, S.E. :

May 14, 1884.

#### GENERAL.

**A Marble Statue** of the Queen has been purchased and presented to the town of Birmingham by public subscription. The statue is a companion to that of the late Prince Consort, and has been executed by Mr. Woolner.

**Mrs. Gladstone** will, on May 19, preside at an interesting gathering in the new studio of Mr. Adams Acton, the sculptor, whose energetic wife (in association with many of the leading ladies of St. John's Wood) has arranged to hold a bazaar of an artistic character, with the environment of her husband's Classic studies, in aid of Mrs. Gladstone's Convalescent Home. The success of the amateur plays which were recently enacted there on behalf of the same charity has kindled fresh enthusiasm on its behalf, and given great encouragement to the workers of the "Sunnyside Bee," founded by Mrs. Adams Acton. Lady Frederick Cavendish will preside on May 20.

**The Bequest of the late Mr. John Newton Mappin** to the town of Sheffield consists of 136 catalogued pictures and some half-dozen which were bought too late to be included in the list in the possession of the owner. The executors have resolved that the works shall not be made public till after they are placed in the gallery to be built for their reception, for which purpose Mr. Mappin left a sum of 15,000*l*. It has been decided to build a gallery adjoining the Western Museum, to consist of several rooms. The collection consists of works by the following artists amongst others:—E. Armitage, R.A., Rosa Bonheur, Boughton, J. P. Clays, J. Constable, R.A., David Cox, T. Creswick, R.A., E. Crofts, A.R.A., John (old) Crome, L. Dansaert, H. W. B. Davis, R.A., W. C. Dobson, R.A., Thomas Faed, R.A., Copley Fielding, Edouard Frère, W. P. Frith, R.A., Frederick Goodall, R.A., Sir Edwin Landseer, R.A., Cornelius van Leemputten, Roland Le Fevre, John Linnell, sen., J. T. Linnell, William Linnell, Jutzens,

J. E. Millais, R.A., G. Morland, W. G. Mückley, W. Müller, L. Muntz, Patrick Nasmyth, Erskine Nicol, A.R.A., W. O. Orchardson, R.A., J. Pettie, R.A., J. Phillip, R.A., David Roberts, R.A., Clarkson Stanfield, R.A., Marcus Stone, A.R.A., G. A. Storey, R.A., J. M. W. Turner, R.A., E. M. Ward, R.A., and James Webb.

**Mr. Ewan Christian**, architect to the Ecclesiastical Commissioners, examined on Tuesday the plans of the St. John's site for the proposed cathedral for Liverpool, and expressed the opinion that it was a most excellent site for a building which would be a credit to Liverpool; in fact, he hardly knew one superior to it in England.

**Mr. J. M. Dick Peddie**, architect, of Edinburgh, read a paper on Monday evening before the Society of Antiquaries of Scotland, describing the old timber house at the head of the Lawnmarket, recently pulled down. Mr. Peddie, while lamenting the necessity which existed for the demolition of this typical specimen of an interesting class of buildings once common in the city, was glad of the opportunity of investigating its construction, which did not seem to be quite clearly understood. By the aid of a large number of carefully-prepared drawings, plans, and sections, he went minutely into the details of its construction, showing that it was not a building of stone faced with wood, as had been supposed, but a building wholly of wood above the street front, with open galleries giving access to the various rooms. He also referred to a rather fine example of a painted ceiling which it had contained. Mr. MacGibbon, Mr. George Seton, and Mr. Burnett, Lyon King-of-Arms, followed with some remarks on the interesting features of the structure and the ceiling, which was compared with those at Linlithgow, Earlshall, &c.

**Baths and Washhouses, Newcastle-on-Tyne.**—Mr. Picton, F.S.A., of Liverpool, who was appointed by the Newcastle Corporation to decide upon the plans sent in for the erection of baths and washhouses in Scotswood Road, Byker, and Arthur's Hill, has announced his award as follows:—For the Scotswood Road site—(1) Messrs. Gibson & Allan, Newcastle-on-Tyne; (2) Messrs. Clark & Moscrop, Darlington; (3) Messrs. Tate & Popplewell, Manchester. For the Byker site—(1) Messrs. Gibson & Allan, Newcastle-on-Tyne; (2) Messrs. Clark & Moscrop, Darlington; (3) Mr. T. W. Dyson, Newcastle. For the Arthur's Hill site—(1) Messrs. Gibson & Allan, Newcastle-on-Tyne; (2) Messrs. Clark & Moscrop, Darlington; (3) Mr. Alfred Darbyshire, F.R.I.B.A., Manchester. The cost, exclusive of sites, not to exceed 24,000*l*.

**International Health Exhibition.**—Among the handbooks published by Messrs. William Clowes & Son, Limited, of Charing Cross, the following appear:—"Healthy Villages," by Dr. H. W. Dyke-Acland, C.B., M.D., F.R.S.; "Healthy Bedrooms and Nurseries, including the Lying-in-Room," by Mr. Gladstone; "Healthy and Unhealthy Houses in Town and Country," by Mr. William Eassie, C.E., with an appendix by Mr. Rogers Field, C.E.; "Healthy Furniture and Decoration," by Mr. Robert W. Edis, F.S.A.; "Healthy Schools," by Mr. Charles Paget, M.R.C.S.; "Health in Workshops," by Mr. James B. Lakeman; and a "Manual of Heating, Lighting, and Ventilation," by Captain Douglas Galton, C.B., F.R.S.

**Glasgow Architectural Association.**—The ordinary monthly meeting was held last week, the vice-president, Mr. Henry Daldie, in the chair. A paper on "Italian Gothic" was read by Mr. Alexander McGibbon, illustrated by photographs, prints, and chalk diagrams. Without by any means giving unqualified praise to the style, the essayist yet considered that many of its most characteristic features were suitable for adaptation to modern requirements and the materials at hand, more particularly as regards its system of polychromatic decoration, which might legitimately be applied to our own street architecture.

**Grimsby.**—New schools are about to be erected at Great Grimsby for the Clee with Weelsby School Board, to accommodate 500 children, from the designs of Mr. E. W. Farebrother, A.R.I.B.A., architect, Grimsby.

**The Bradford Corporation** have decided to purchase land in Chapel Lane for the proposed erection of additional municipal buildings.

**Messrs. Wheatley & Cridland** will, on May 20, hold an important sale of mosaics, encaustic floor and wall tiles at Hamworthy.

**Messrs. Powis & Co.**, contractors, of London, who have an action against the Leamington Corporation of long standing, have filed their statement of claim, in which damages are laid at 17,000*l*. The action arises out of the contract they had for completing the waterworks. The Council have a counter-claim against the plaintiffs.

**The Engineering Department** of the Yorkshire College at Leeds is about to be enlarged, to admit of more students at the classes, and towards this object Sir Andrew Fairbairn, M.P., and Sir John Hawkshaw have each contributed 1,000*l*.

**The Wolverhampton Corrugated Iron Company** have just supplied the whole of the galvanised corrugated iron for the Wolverhampton Exhibition.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MAY 17, 1884.

### TENDERS, ETC.

*As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—“Contract Supplement to THE ARCHITECT.”*

### COMPETITIONS OPEN.

**BURNLEY.**—July 1.—Plans are required for the Erection of Municipal Buildings, Police Courts, and Baths. Premiums of 200, 100, and 50 guineas. Mr. J. E. Stafford, C.E., Borough Engineer, Burnley.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**LILANELLY.**—May 31.—Plans are required for a School in Three Departments (Boys, Girls, and Infants). Mr. J. Jennings, Clerk to the School Board, Lilanelly.

**SUNDERLAND.**—May 19.—Designs are invited for Laying out Twenty Acres of Land, the Mill Farm and Broad Meadows, Durham Road, Sunderland, for Villas, Terraces, or Street Rows, with Sewerage, &c. Premiums of Thirty and Twenty Guineas. Messrs. Duncan & Duncan, Solicitors, 3 Market Place, South Shields.

### CONTRACTS OPEN.

**AYMESTRY.**—May 20.—For Partial Restoration of Parish Church. Mr. T. Nicholson, Architect, Hereford.

**BARNET.**—May 17.—For Building Upholsterer's and Pawnbroker's House, Shop, and Premises. Messrs. Prickett, Venables & Co., Surveyors, 56 Chancery Lane, and Barnet, Herts.

**BATLEY.**—May 20.—For the Works in the Erection of Two Dwelling-houses, Surrey Street. Mr. J. T. Law, Architect, 64 Commercial Street, Batley.

**BELFAST.**—May 22.—For Alterations and Improvements to Presbyterian Church. Messrs. Young & Mackenzie, Architects, Donegall Square East, Belfast.

**BOLLINGTON.**—May 20.—For Building Wesleyan Chapel. Messrs. W. Waddington & Son, Architects, 25 Cross Street, Manchester.

**BUCKIE.**—May 26.—For Building Dwelling-house and Offices. Mr. G. A. Bruce, Architect, Banff.

**BUDLEIGH SALTERTON.**—May 20.—For Building Inn. Mr. W. H. Wells, Architect, 15 High Street, Budleigh Salterton.

**CHURCH STRETTON.**—May 22.—For Building Vagrant Wards at the Workhouse. Mr. S. H. Kough, Clerk to the Guardians, Church Stretton.

**COLNE.**—May 29.—For Construction of Reservoir on the River Laneshaw. Messrs. Bateman & Hill, C.E., Albert Chambers, Albert Square, Manchester.

**COVENTRY.**—May 31.—For Alteration of Britannia Hotel. Mr. W. Langley, Architect, 18 Smithfield Street, Coventry.

**DERBY.**—May 28.—For Building Studies, Dining-hall, and other Premises, Repton Hall. Mr. John Shaw, The College, Derby.

**DEWSBURY.**—May 19.—For Building Lodge, Moorlands Road. Messrs. Smith & Tweedall, Architects, Manor Street, Dewsbury.

**DEWSBURY.**—May 23.—For Building Wesleyan Mission Room, Eastborough. Mr. F. W. Ridgway, Architect, Church Street, Dewsbury.

**EARLSHEATON.**—May 27.—For Building Wesleyan Chapel. Messrs. Kirk & Sons, Architects, Dewsbury.

**ELLAND.**—May 29.—For Building House. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**FENNY STRATFORD.**—May 24.—For Works to Tower and North Aisle of St. Martin's Church. Mr. E. G. Bruton, Architect, 17 New Hall Inn Street, Oxford.

**FRIZINGTON.**—May 21.—For Erection of Dwelling-house and Farm Buildings. Mr. J. N. Dickinson, 7 Corkickle, Whitehaven.

**GAINSBOROUGH.**—May 19.—For Making a new Barrier Bank. Mr. Alfred Atkinson, Surveyor of Sewers, Brigg.

**GRANGE.**—May 21.—For Building Stables at Yewbarrow Lodge. Mr. J. Bintlry, Architect, Old Town Hall Chambers, Kendal.

**GRAVESEND.**—May 20.—For Building Boat-sheds, Dressing-rooms, &c., for Rowing Club. Mr. E. J. Bennett, 28 Queen Street, Gravesend.

**GREENFIELD.**—May 19.—For Building Detached Villa. Messrs. John Eaton & Sons, Architects, Ashton-under-Lyne.

**GREENWICH.**—May 22.—For Enlargement of the Union Workhouse. Mr. W. Wallen, Architect, 26 College Street, E.C., and 92 London Street, Greenwich, S.E.

**HALIFAX.**—May 28.—For Pulling down Inn and Building Three Shops, Offices, House, &c. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

**HAMMERSMITH.**—May 22.—For Adding Wing to Premises used at School. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**HAYFIELD.**—May 20.—For Building Board School. Mr. C. W. Johnson, Architect, Whaley Bridge.

**HULL.**—May 22.—For Building Additional Wing to the General Infirmary and Out-patients' Department in Brook Street. Messrs. H. Saxon Snell & Soa, Architects, 22 Southampton Buildings, Chancery Lane, W.C.

**KING'S LYNN.**—May 26.—For Erection of Buildings for Young Men's Society. Mr. E. J. Colman, Architect, Market Place, Lynn.

**LEEDS.**—May 26.—For Building Caretaker's House at South Accommodation Road Board School. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

**LICHFIELD.**—May 27.—For Alterations and Additions to Ogley Hay and Shelfield Board Schools. Mr. T. H. Fleeming, Architect, Waterloo Road, Wolverhampton.

**LIVERSEDGE.**—May 22.—For Additions to the Yorkshire Machine Tool Works. Mr. S. Sinkinson, Architect, Mill-bridge, Liversedge.

**LONG EATON.**—May 19.—For Building Villa with Out-buildings, Fence Walls, &c. Mr. John Sheldon, Architect Market Place, Long Eaton.

**MARKET RASEN.**—June 7.—For Works to Parish Church Tower. Messrs. Charles Kirk & Sons, Architects, Sleaford.

**MELTON MOWBRAY.**—May 21.—For Enlarging Saltby Church. Rev. C. Rodwell, Sprexton Vicarage, Melton Mowbray.

**MIRFIELD.**—May 21.—For Construction of Abutments, Approaches, &c., of Bridge over River Calder. Mr. L. H. Moorsom, C.E., 20 Cooper Street, Manchester.

**OLDHAM.**—May 20.—For Building Workhouse Schools. Mr. Alexander Banks, Architect, 231 Rochdale Road, Oldham.

**ROCHESTER.**—May 19.—For Building Pair of Villas, Borstal Road. Mr. John Drake, Architect, Rochester.

**RODLEY.**—May 21.—For Building General Offices, &c., at the Steam Crane Works. Mr. T. Winn, Architect, 18 Park Lane, Leeds.

**SEATON, DEVON.**—May 31.—For Extensive Additions to Beach House for an Hotel. Mr. Eggar, Architect, 57 Gower Street, Bedford Square, London.

**STANNINGLEY.**—May 17.—For Building Methodist Schools. Mr. C. S. Nelson, Architect, Albert Chambers, Park Row, Leeds.

**STRATFORD-ON-AVON.**—May 17.—For Cast-iron Socket Pipes (650 tons), Special Castings, &c. Mr. E. Pritchard, C.E., 27 Great George Street and 37 Waterloo Street, Birmingham.

### TENDERS.

#### ACTON.

For Erection of Ladies' and Gentlemen's Dressing-rooms, &c., on Lawn Tennis Ground, Cumberland Park Estate, Acton. Mr. ALFRED WRIGHT, Architect & Surveyor, Belgrave House, 190A Brompton Road, and 18 Hayter Road, Brixton Rise, S.W.  
Bray . . . . . £175 0 0

#### ATHERSTONE.

For Renovation of Corn Exchange, Atherstone. Mr. WM. TOMLINSON, Architect, Coventry.  
Pullin . . . . . £107 0 0  
Fisher . . . . . 66 8 6  
MERCER & SONS (accepted) . . . . . 57 6 6

#### BALLINASLOE.

For Making Cemetery at Ballinasloe. Mr. W. H. KEMPSTER, Architect.  
Ward, Ballinasloe . . . . . £620 0 0  
Fahey & Boland, Ballinasloe . . . . . 618 0 0  
O'Brien, Ballinasloe . . . . . 569 10 0  
Cody, Lawrencetown . . . . . 547 12 0  
CONNELL, Ballinasloe (accepted) . . . . . 533 0 0

#### BRIESTFIELD.

For Additions to Farm Buildings on the Estate belonging to Sir Geo. Armytage, Bart., at Bristfield, Yorks. Mr. R. F. ROGERSON, Architect, Brighouse.

#### Shoulder of Mutton Inn.

##### Masons.

Wilcock, jun., Dewsbury . . . . . £17 0 0  
BOOTH & GREGORY, Dewsbury (accepted) . . . . . 16 2 4

##### Joiners.

Addy, Dewsbury . . . . . 8 10 0  
HAIGH, Dewsbury (accepted) . . . . . 7 0 0

#### Mr. Hampshire's Farm.

##### Masons.

Wilcock, jun. . . . . 7 0 0  
BOOTH & GREGORY (accepted) . . . . . 5 2 9

##### Joiners.

Haigh . . . . . 12 10 0  
ADDY (accepted) . . . . . 11 0 0

#### Mr. Deaton's Farm.

##### Masons.

Wilcock, jun. . . . . 6 0 0  
BOOTH & GREGORY (accepted) . . . . . 4 12 0

##### Joiners.

HAIGH (accepted) . . . . . 2 0 0  
Addy . . . . . 2 0 0

#### CROOK.

For Erection of Two Additional Shops, Offices, House, &c., for the Crook Co-operative Society.

Walton, Crook . . . . . £2,330 0 0  
W. & A. Blackett, Bishop Auckland . . . . . 2,270 0 0  
Hilton, Crook . . . . . 2,265 0 0  
HARR, Crook (accepted) . . . . . 2,200 0 0



## CARLINGHOW.

For Building Parsonage House, Carlinghow, Batley. Mr. MICHAEL SHEARD, Architect, Batley.		
Accepted Tenders.		
J. & T. Oldroyd, mason . . . . .	£582	0 0
Willans, joiner . . . . .	253	18 0
Thornton, slater . . . . .	47	7 0
Firth, plumber . . . . .	39	0 0
Metcalf & Lckwood . . . . .	37	17 0

## CORK.

For Erecting Forty-two Houses for Cork Improved Dwellings Company (Limited). Mr. W. H. HILL, B.E. Architect.		
T. O'Flynn . . . . .	£5,000	0 0
E. & P. O'Flynn . . . . .	4,996	0 0
Evans . . . . .	4,746	0 0
Fitzgerald . . . . .	4,378	0 0
Longfield . . . . .	4,369	0 0
Delany . . . . .	4,103	0 0
HILL (accepted) . . . . .	3,797	0 0

## DARTMOUTH.

For Ventilating the Subscription Rooms, Dartmouth. Mr. E. H. BACK, Architect.		
Henley . . . . .	£79	0 0
Pillar & Sons . . . . .	68	5 0
WILLIAMS (accepted) . . . . .	54	4 0
Architect's estimate . . . . .	63	15 0
For Laying New Sewer at Ford, Dartmouth, for the Town Council. Mr. E. H. BACK, Borough Surveyor.		
Fellow . . . . .	£31	0 0
Veale . . . . .	39	10 0
Surveyor's estimate . . . . .	39	0 0
For Repairs to Streets and Footpaths, Dartmouth, for the Town Council. Mr. E. H. BACK, Surveyor.		
Pillar & Sons, Dartmouth . . . . .	£330	0 0
Ferris, Dartmouth . . . . .	320	0 0
TUCKER, Blackawton (accepted) . . . . .	262	10 0
Surveyor's estimate . . . . .	292	0 0

## DUKINFIELD.

For Paving and Kerbing Works, for the Dukinfield Local Board. Mr. W. SPINKS, Surveyor.		
Astley Street.		
Randle, Widnes . . . . .	£1,070	7 6
Burton & Sons, Ashton-under-Lyne . . . . .	956	0 0
Heaton, Warrington . . . . .	945	0 0
Worthington, Manchester . . . . .	939	5 0
Sterling, jun., Liverpool . . . . .	929	0 0
Nuttall, Manchester . . . . .	924	10 0
SMITH, Rusholme (accepted) . . . . .	904	7 1
King Street.		
Randle . . . . .	1,220	17 6
Heaton . . . . .	1,125	0 0
Burton & Sons . . . . .	1,083	0 0
Nuttall . . . . .	1,073	5 0
Worthington . . . . .	1,017	8 9
Smith . . . . .	1,015	17 6
STERLING, jun. (accepted) . . . . .	1,000	0 0

## GLASGOW.

For Construction of Reservoir, Filters, &c., at Newmilns Bleach Works. Messrs. NIVEN & HADDIN, C.E., 131 West Regent Street, Glasgow.		
Allan, Glasgow . . . . .	£954	18 3
Read, Kilmarnock . . . . .	807	9 11
Pollock, Greenock . . . . .	744	0 10
Quin, Springburn . . . . .	686	17 6
Pearson, Ayr . . . . .	664	10 6
Kirkland, Ayr . . . . .	658	1 8
Duncan, Govanhill . . . . .	653	14 4
R. & J. Moffat, Paisley . . . . .	602	0 11
Bolton, Glasgow . . . . .	600	17 11
Harvie, Lesmahagow . . . . .	564	3 2
Fleet, Milton of Campsie . . . . .	525	7 7
OSBORNE, Ayr (accepted) . . . . .	500	5 2

## HECKMONDWIKE.

For Building Branch Store and Manager's House at Dewsbury Moor, for the Heckmondwike Industrial Co-operative Society. Mr. SAMUEL WOOD, Architect. Quantities by the Architect.		
Whitehead, mason . . . . .	£379	0 0
W. & S. Milnes, joiner . . . . .	270	0 0
Thornton, slater . . . . .	49	18 0
Brook, plumber . . . . .	36	6 0
Greenwood, plasterer . . . . .	15	8 0
Total . . . . .	750	12 0

## LENNOXTOWN.

For Constructing Reservoir, Filter, and Tank, Laying Main and Branch Pipes, &c., for the Local Authority of the Parish of Campsie. Messrs. NIVEN & HADDIN, C.E.		
J. Murray, jun., Maryhill . . . . .	£1,527	0 0
Duncan, Glasgow . . . . .	1,323	0 0
Frew, Airdrie . . . . .	1,188	0 0
Flett, Campsie . . . . .	1,182	0 0
Quin, Springburn . . . . .	1,172	0 0
Harvie, Lesmahagow . . . . .	1,079	0 0
McKenzie, Kirkcaldy . . . . .	1,078	0 0
Osborne & Stevenson, Ayr . . . . .	1,076	0 0
Bolton, Glasgow . . . . .	1,073	0 0
Henderson, Glasgow . . . . .	1,064	0 0
BLACK & RADIE, Johnstone (accepted) . . . . .	909	0 0
Donald, Kilsyth . . . . .	746	0 0
For Supplying 150 tons of Cast-iron Pipes, for the Lennoxtown Water Works, for the Local Authority of Campsie. Messrs. NIVEN & HADDIN, C.E.		
Laidlaw & Son, Glasgow . . . . .	£888	0 0
Edington & Sons, Glasgow . . . . .	880	0 0
MacFarlane, Strang & Co., Maryhill . . . . .	878	0 0
Stewart & Co., Glasgow . . . . .	874	0 0
MacLaren & Co., Glasgow . . . . .	870	0 0
ALLAN & SON, Glasgow (accepted) . . . . .	745	0 0

## LONDON.

For Alterations for the Egyptian Cigarette Company. Mr. H. I. NEWTON, 17 Queen Anne's Gate, S.W. GODDEN (accepted) . . . . .	£350	0 0
For Repairs at the Licensed Victuallers' Schools, Kennington Lane, for the Incorporated Society of Licensed Victuallers. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.		
Godden . . . . .	£362	0 0
Stilling . . . . .	275	0 0
Lamble . . . . .	233	0 0
Royal . . . . .	216	0 0
Cook . . . . .	159	0 0
Crabtree . . . . .	155	0 0
For Coal Hoppers and Stages at Nine Elms. Mr. HENRY ADAMS, C.E., Engineer and Surveyor.		
Lucas Bros. . . . .	£6,950	0 0
Little . . . . .	5,778	0 0
Clarke & Bracey . . . . .	5,688	0 0
Hall, Beddall & Co. . . . .	5,583	0 0
Bangs & Co. . . . .	5,290	0 0
Nightingale . . . . .	5,247	0 0
HACK (accepted) . . . . .	5,128	0 0
For Offices and Residence at Nine Elms, Mr. HENRY ADAMS, C.E., Architect and Surveyor.		
Lucas Bros. . . . .	£803	0 0
Hall, Beddall & Co. . . . .	705	0 0
Little . . . . .	642	0 0
Bangs & Co. . . . .	598	0 0
Clarke & Bracey . . . . .	593	0 0
Nightingale . . . . .	587	0 0
HACK (accepted) . . . . .	553	0 0
For New Roads and Sewers at Hampstead. Messrs. FAREBROTHER, ELLIS, CLARK & Co., Surveyors.		
Rogers & Dickens . . . . .	£11,320	0 0
Culverhouse . . . . .	11,300	0 0
Watts . . . . .	11,216	0 0
Wilson . . . . .	10,975	0 0
Killingback . . . . .	10,910	0 0
Nowell & Robson . . . . .	10,825	0 0
For Road and Sewer Works on the Hampstead Estate, in continuation of Canfield Gardens to Fairhazel Gardens. Messrs. FAREBROTHER, ELLIS, CLARK & Co., Surveyors.		
Culverhouse . . . . .	£1,525	0 0
Wilson . . . . .	1,510	0 0
Nowell & Robson . . . . .	1,490	0 0
Watts . . . . .	1,469	0 0
Bell . . . . .	1,467	0 0
Rogers & Dickens . . . . .	1,453	0 0
Killingback . . . . .	1,439	0 0
For Breeding Mission Hall, Workmen's Club, &c., at North Finchley. Mr. F. D. THOMSON, Architect, North Finchley.		
Thrum . . . . .	£1,950	0 0
Grover . . . . .	1,944	0 0
Dixon . . . . .	1,733	0 0
Larter & Son . . . . .	1,650	0 0
Brown & Sweetland . . . . .	1,620	0 0
Russell . . . . .	1,550	0 0
Sheppard . . . . .	1,443	0 0
For Additions and Alterations at the Red Lion Inn, High Road, Kilburn. Mr. BENJAMIN ELSON, Architect. Quantities not supplied.		
Canning & Mullins . . . . .	£285	0 0
Colwill . . . . .	270	0 0
Tanner & Hodge . . . . .	145	0 0
For Alterations and Additions to Premises at Thornhill Bridge, Caledonian Road, N., for Messrs. Thorley & Co. Mr. R. N. SHAW, Architect.		
Pictou . . . . .	£1,139	0 0
Williams & Son . . . . .	1,123	0 0
Spencer & Co. . . . .	1,015	0 0
Taylor . . . . .	985	0 0
For Alterations at the Lord Portman Public-house, Broadley Terrace, Blandford Square, N.W., for Mrs. Fanny Cowlin. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.		
Cook . . . . .	£971	0 0
Royal . . . . .	860	0 0
Walker . . . . .	853	0 0
Steel Bros. . . . .	823	0 0
Lamble . . . . .	769	0 0
GODDEN (accepted) . . . . .	756	0 0
Pewterer's Work.		
Davidson . . . . .	100	0 0
Sanders . . . . .	83	0 0
Hellings . . . . .	81	0 0
HEATH (accepted) . . . . .	77	0 0
Gasfittings.		
WINN (accepted) . . . . .		
LUTON.		
For Alterations and Additions to Town Hall, Luton. Mr. W. H. LEETE, Borough Surveyor.		
Amount of General Estimate.		
Dunham . . . . .	£1,105	0 0
Slough Bros. . . . .	810	0 0
Borough Surveyor's estimate . . . . .	902	15 0
Extra for Pitch Pine Staircase to Main Hall.		
Dunham . . . . .	37	10 0
Slough Bros. . . . .	14	10 0
Borough Surveyor's estimate . . . . .	28	0 0
Extra if Patent Stone instead of Pitch Pine.		
Slough Bros. . . . .	26	0 0
Dunham . . . . .	12	10 0
Borough Surveyor's estimate . . . . .	8	10 0
Extra if York Stone instead of Patent Stone.		
Dunham . . . . .	50	0 0
Slough Bros. . . . .	15	0 0
Borough Surveyor's estimate . . . . .	12	10 0
Additional Cost if Dawney's Fireproof Floor and Slag Cotton be used.		
Slough Bros.* . . . . .	123	10 0
Dunham . . . . .	116	0 0
Borough Surveyor's estimate . . . . .	146	0 0
* Messrs. Slough Bros. Tender accepted, with extras, £89		

## NEWTON-LE-WILLOWS.

For Building Chapel, Lodge, Boundary Wall, &c., at Cemetery, Newton-le-Willows.		
Pennistone, Newton-le-Willows . . . . .	£2,908	0 0
Yates, Liverpool . . . . .	2,749	0 0
Preston, Wigan . . . . .	2,723	11 6
Harrison, St. Helens . . . . .	2,723	0 0
Winnard, Wigan (too late) . . . . .	2,620	8 0
Haughton, Godley . . . . .	2,635	0 0
Porter, Warrington . . . . .	2,568	0 0
Collin & Son, Warrington . . . . .	2,515	4 0
Beckett, Hartford . . . . .	2,498	0 0
ROTHWELL, St. Helens (accepted) . . . . .	2,387	0 0
For Draining and Forming Roads, Paths, &c., for New Cemetery, for the Newton Improvement Commissioners. Mr. R. BRIERLEY, Surveyor.		
White, Liverpool . . . . .	£1,398	17 0
Sterling, jun., Liverpool . . . . .	1,032	0 0
Heaton, Warrington . . . . .	950	0 0
Adamson, Ashton-le-Willows . . . . .	884	12 11
CUNLIFFE, Leigh (accepted) . . . . .	832	18 0

## NOTTINGHAM.

For Sewering Streets, Nottingham. Mr. A. BROWN, Borough Engineer.		
Meats Bros., Nottingham . . . . .	£305	0 0
Hopkin, Nottingham . . . . .	268	7 7
Knight, Loughborough . . . . .	266	14 6
Shortland, Nottingham . . . . .	218	1 6
CORDON, jun., Nottingham (accepted) . . . . .	194	1 5

## OLDHAM.

For Building St. John's Schools, Hey Lees, near Oldham. Mr. HENRY COCKBAIN, Architect, Middleton, near Manchester.		
Dawson . . . . .	£4,168	0 0
Dyson & Sons . . . . .	4,050	15 0
J. & J. WHITEHEAD (accepted) . . . . .	3,947	10 0

## PRESTON.

For Wesleyan Chapel, Longridge, near Preston. Mr. D. GRANT, Architect, Preston.		
Accepted Tenders.		
Harrison & Alston, stonework . . . . .		
Hesmondhalch, woodwork . . . . .		
Clarkson, slating . . . . .		
Woods & Westray, plumbing, &c. . . . .	£1,020	0 0
Swarbrick, plastering . . . . .		
Seward, heating . . . . .		
Walmesley & Co., gas . . . . .		

## ROMFORD.

For Business Premises, South Street, for Mr. G. B. Gilbey. Mr. J. W. SHERVENS, Architect and Surveyor, 1 Dyer's Buildings, Holborn, E.C.		
If the Stonework of Front is executed in Bath stone, Portland. Red Corsehill.		
	Extra.	Extra.
Reed, Stratford . . . . .	£50	0 0
Williams, Pimlico . . . . .	50	0 0
Morter, Stratford . . . . .	30	0 0
Wood, Chelmsford . . . . .	30	0 0
Hammond, Romford . . . . .	28	8 34
Coleman, Poplar . . . . .	110	0 95
Holland, Poplar . . . . .	35	0 25
Johnston, Limehouse . . . . .	52	10 72
Pryor, Hornsey . . . . .	30	0 30
North Bros., Stratford . . . . .	22	0 26
England & Thomson . . . . .		
Leytonstone . . . . .	1,055	35 0 30

## SALISBURY.

For Building House, Milford Hill, Salisbury. Messrs. JOHNS HARDING & SON, Architects, Salisbury. Quantities by Architects.		
West, Salisbury . . . . .	£1,777	10 6
Dibben & Co., Salisbury . . . . .	1,725	6 0
Tryhorn, Salisbury . . . . .	1,625	10 0
Soper & Son, Salisbury . . . . .	1,614	13 6
Harris, Salisbury . . . . .	1,510	0 0
Dolman, Salisbury . . . . .	1,499	0 0
Hale, Salisbury . . . . .	1,499	0 0
Crook, Southampton . . . . .	1,497	0 0
Cooper, Salisbury . . . . .	1,482	10 0
W. J. & C. S. Young, Salisbury . . . . .	1,475	0 0
DAWKINS, Salisbury (accepted) . . . . .	1,473	0 0

## SOUTH WARBOROUGH.

For Building Pair of Cottages, Blouance Farm, South Warborough, Hants. Messrs. HASLAM & SON, Architects, Reading.		
March . . . . .	£535	14 0
Blunden . . . . .	460	0 0
Liming Bros. . . . .	458	0 0
Batten . . . . .	427	0 0
Mills & Rogers . . . . .	423	5 0
Newberry . . . . .	380	0 0

## STAFFORD.

For Building Club-house and Premises, Stafford, for the Stafford Public Hall Company. Mr. GEORGE WORNAL, Architect. Quantities by the Architect.		
Whitmore . . . . .	£949	0 0
Adams & Pemberton . . . . .	932	0 0
Jervis . . . . .	890	0 0
HERBERT (accepted) . . . . .	875	0 0
Bridgett . . . . .	834	0 0
For Construction of a Shaft or Well, and other Work, 220 feet depth and 8 feet diameter, and Boring from the Bottom of the Shaft to a depth of 700 feet, at Enson Moor, on Estate of Earl of Harrowby. Mr. WILLIAM BLACKSHAW, Borough Surveyor, Stafford.		
Jones & Wild, London . . . . .	£5,858	18 4
Rawson & Co., Newcastle, Staffs. . . . .	4,804	12 0
Chapman, Manchester . . . . .	4,746	0 0
Batchelor, Luton . . . . .	4,496	10 0
Timmers, Runcorn . . . . .	4,391	0 0
Smalley, Hull . . . . .	3,933	10 0
Vivian, Whitehaven . . . . .	3,111	17 6
Espley, Stafford . . . . .	2,647	3 0
TURNER, Wolverhampton (accepted) . . . . .	1,935	14 2
Kendrick, Rugeley (for shaft only) . . . . .	673	0 0



STRATFORD.

For the Erection of Depot at Stratford, for Messrs. Carter, Paterson & Co., under the superintendence of Mr. WILLIAM EVE, 10 Union Court, Old Broad Street, E.C.

Rowe	£2,953	0	0
Morter	2,895	0	0
Higgs	2,796	6	0
Downs	2,794	0	0
Harris & Wardrop	2,752	0	0
Perry	2,750	0	0
D. W. & A. BROWN, Camberwell Green (accepted)	2,732	0	0

SWINDON.

For Building Wesleyan Mission Hall, New Swindon. Mr. ORLANDO BAKER, Architect. Quantities not supplied.

Barrett	£440	0	0
Jackson	393	10	0
WEBB (accepted)	382	0	0
Gibbs	368	10	0

For Building Six Houses and One Shop and Dwelling-house, at Even Swindon. Mr. ORLANDO BAKER, Architect. Quantities not supplied.

Wiltshire	£1,180	0	0
Williams	1,167	17	7
TURVEY (accepted)	1,151	10	0

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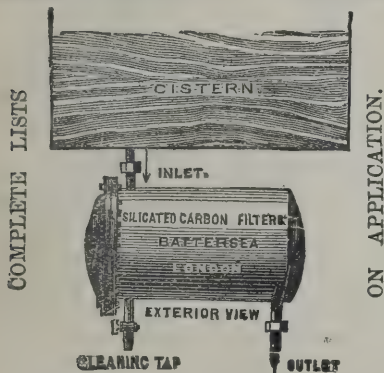
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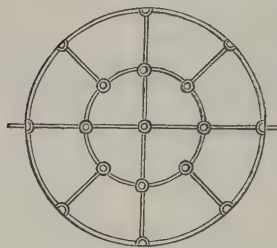
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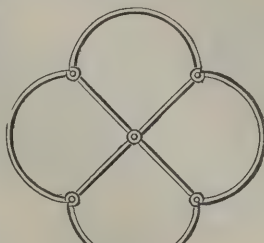
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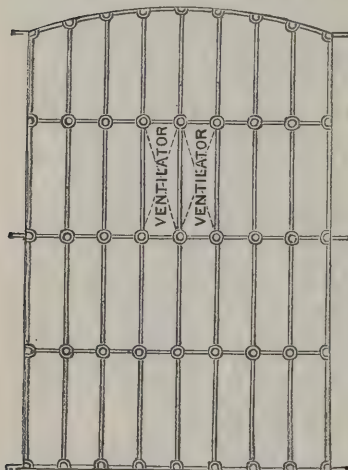
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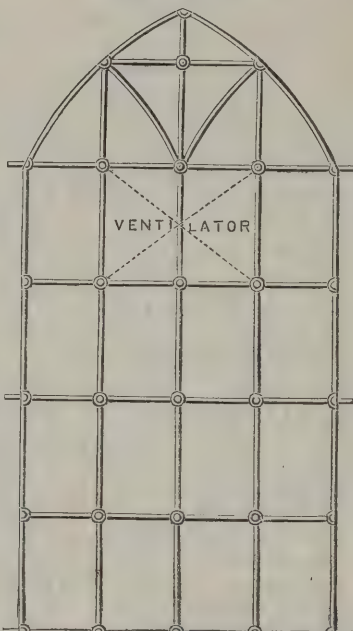
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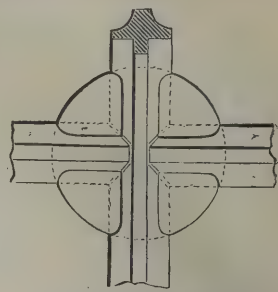
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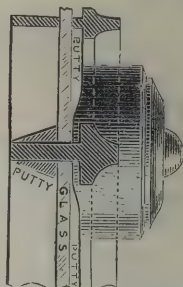
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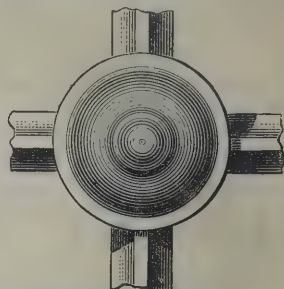


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# The Architect.

## THE DOME OF THE FUTURE.



HE dome has always had a mystery about it, whether artistically or scientifically regarded, and the higher criticism of architecture, when it used to be more cultivated than it is now, has again and again turned, with a kind of affectionate apprehension or apprehensive affection, to some new study of the subject. The late Professor COCKERELL, in that pedantic way which was so charming with him, would in his Academy lectures dwell almost ecstatically upon the theme; and his admiring young audience would

take it as a personal compliment when he went so far as to tell them of "the dome that crowns the human form divine." Sir GILBERT SCOTT, occupying the same platform many years after, made one of his strongest points when he claimed for the Gothic style an equal æsthetic interest in the dome, which some thoughtlessly supposed to be but a commonplace Classic or neo-Classic feature. MICHAEL ANGELO considered that he was pursuing vaulting ambition to the very zenith when he boasted that the dome of the Parthenon should be elevated upon the summit of St. Peter's. Our own Sir CHRISTOPHER WREN none the less admired himself, doubtless, and admired his art, when he upraised into the not then so dirty air the bright and graceful, if hollow, crown of his Cathedral of London City. And we may perhaps be permitted to add that, if the Liverpool people of to-day, in resolving to build for themselves a modern cathedral upon such great lines as shall be worthy of the dignity of their boasted wealth, should take the hint to try what can be had in the nature of a dome once more, whether Classic or Gothic, the way is open to them still to do quite as well as WREN did, and perhaps a good deal better.

Mr. EMERSON, who has had a considerable amount of experience in the design of modern Indian building, submitted to the Institute of Architects on Monday evening some highly interesting observations on the character and construction of Oriental domes, and, indeed, of domes in general, from that of the Taj Mahal to that of St. Paul's. Such is his admiration of the noblest integer of architectural design that he even permitted himself to ask whether, in the new style, more muscular and modern, which we are beginning to hope it may be the task of English architects to conquer in the early future, it might not be well to regard the dome as capable of giving a specific direction to the efforts of intellectual ingenuity. The walls of the lecture-room being well covered with drawings of domes of all kinds, the opportunity was accepted for what turned out to be almost a debate on domes, in which it was, however, to be regretted that so few were present to participate.

Amongst the rest, when the dome of St. Paul's became a subject of attention, it will not surprise some of our readers, perhaps, so much as it did a section of the meeting, that the well-known discord which prevails between the outside and the inside of the structure was somewhat pointedly animadverted upon. Critics pretty well understand nowadays that the "dome" in this case is not a dome at all, but a graceful round-roofed tower atop of a dome. Still it was to the credit of the meeting as regards British patriotism that the denunciation of its character as a sham dome—which there can be no doubt the architect only too solemnly intended it for—should be repudiated earnestly. That the inner dome—the only real dome—is of a proportionate height within, while the outer dome—the lead-covered empty roof of timber 50 feet higher—is of a proportionate height without, was pronounced by the President himself amongst others to be enough to satisfy criticism. It depends upon what criticism is; but we will take leave at least to say that if the English dome of the future is to rear its head as loftily as the cupola of WREN, and to be as empty withal of intellectual furnishing within, the coming architect of it may safely be advised to beware of the opinion, for once in a way, of the British artist and the British Philistine combined.

The most interesting subject of discussion was the con-

struction of domes, not, of course, with the misplaced ingenuity of WREN, but on the more honest and more simple principles which all the other examples on the walls illustrated, and which obviously had constituted the very test for their admission as illustrations. One of the most suggestive of the drawings was the section of a dome at Baroda constructed by Mr. CHISHOLM, another Indian architect who was fortunately present to speak for himself. The dome is what is called a double one. The structural dome is very sharply pointed; and the outer cupola, resting upon this at springing and summit, follows the bulbous model of the east, so as to leave a narrow interval between the two. Both vaults are of the lightest construction, and there is no lantern. The interval between an outer and inner skin in this way is, as we all know, a question of weather-protection, and in a hot climate, as was well explained, it serves also a most essential purpose in respect of ventilation. Upon this example it was pointed out that the high-pointed section is in reality almost the first essential to a strong dome; it might have been added that the absence of the lantern in Oriental domes is again an essential element, both in their durability and in their facility of construction. It must be borne in mind that the eastern dome-builders use no centering, or almost none; and it is easy to see that this constitutes indeed a criterion of true dome-building.

The use of cramps, chain-bond, or other metal-work in a hot climate was fully discussed; and so far does this seem to be a question for anxiety that Mr. CHISHOLM had an ingenious proposal to submit for using a wrought-iron framework to serve as a tie at the springing level, having balance weights to rise and fall with the changes of temperature. Obviously this could not be called architecture, and the best impression it was calculated to leave upon the mind of an expert went rather to show how needless all such contrivances are if the constructor will but confine himself to the principles proper to the case. A dome requires no tie of any sort except that of good masonry. Every one knows that the most skilful equilibration of the vault of a great bridge furnishes but the theoretical basis upon which an immense margin of stability is created by the mere manipulation of the bond; and just so is it in the dome—indeed the adventitious help of such artifices is here even much more effectual. But it must never be forgotten that a dome commonly so called is not a dome merely because it is of rounded outline; it is a dome, whether in art or in science, only when it is a circular vault of simple building; and then it possesses, beyond all rivalry, the grandest capabilities which the whole range of constructive science offers to the ambitious architect.

It is well understood that modern architects are timorous in two ways: first there is the hereditary narrowness of mind which has been brought about by the dissociation of their structural work from that of the engineer; and, secondly, there is the constant fear of expense. Say what we will of the merits of scientific administration, there can be no doubt that the bugbear of economy—really parsimony—is one of the most serious of all obstacles to the practice of substantial and stately building. It is quite in accordance with this state of things when we find those who have in some degree grasped the idea of dome-building on a large scale—as very few have—turning at once to secret iron ribs as a cheap solution of the problem, as if a dome were no better than an umbrella. The Vienna Exhibition roof, alluded to in the discussion, and unquestionably a great success if only on account of its magnitude, is not a case in point. It was not a dome so much as a grand conical roof of the most characteristic iron framing throughout; and so far it may be regarded as the model of what a dome in iron ought always to be. But it may be truly said that the very essence of such a design—and of course the converging ribs may just as well be curved as straight—lies in the exposure to view of the whole of the ironwork. Something was hinted by one of the speakers about such ironwork being regarded as a skeleton, to be covered, as nature covers the skeleton of an animal, with entirely different material in entirely different form; but it is not necessary for the architect to go even so far as this before he becomes chargeable with sophistication. When, for instance, a domed structure of iron ribs is filled in with panels of concrete slab, we doubt whether this can be regarded as a dome in any sense; it is rather a ceiling, with no matter what outside to keep off the weather; and the concrete slab may just as well be papier-maché, and the ironwork all the slighter, and all the cheaper. Perhaps the best ideal of an iron dome



would be a circular vault-roof—either Classic or Gothic—of the greatest possible extent, the ironwork appropriately ornamented and fully exposed without and within, and the whole surface filled in with dark painted glass; and no doubt such a structure might be made as majestic and glorious in its way as any work of building need ever be.

It may perhaps be suggested whether concrete, not previously prepared in slabs but used plastic, might be employed with advantage in dome-building. Some such mathematical principles being adopted as those which were some years ago expounded by Sir EDMUND BECKETT, the only question for anxiety would be how to make the structure light enough and yet strong enough. The whole dome would be a single inverted cup, and if it failed at all it would simply become fractured in one of two ways—either vertically at the weakest point of equilibration by means of outward thrust, or laterally at a similar point by reason of what is the same thing in effect, the settlement of the crown. The Oriental domes, it is said, exhibit fractures of such a kind in many instances. Even the dome of St. Peter's, as all the world knows, has its cracks that must be watched from year to year. Chain-bond, we need scarcely observe, may overcome all risks. But the whole subject, the more it is discussed, may be said to grow the more interesting to the architect, and the more promising in the direction of magnificent building yet unknown.

#### EXHIBITION NOTES.—THE ROYAL ACADEMY.

THE annual picture show of the Royal Academy is remembered for very various reasons. Sometimes it is fixed in the mind by recollections of certain pictures that have taken the public by storm, for good or evil report, and stirred a strife of tongues that has lasted a whole season and more. Sometimes we record the exhibition because it was so bad, sometimes because it was so good, sometimes because it was neither one nor the other, but only "average." Now the exhibition of this year partakes of all these means for remembrance. In the opinion of no doubt a large number of persons, Sir F. LEIGHTON's large picture, *Cymon and Iphigenia*—on which we commented in "Studio Notes"—is an eventful picture, a picture that marks an exhibition. At any rate, we all know that it has been purchased by the Fine Art Society for a very large sum, for the purpose of reproduction; therefore, from what may be called the point of view of the picture market, we may consider *Cymon and Iphigenia* "eventful." Certainly this somewhat pretentious work looks better at Burlington House than in the studio. Then there is the large canvas by Mr. ALMA TADEMA, R.A., *Hadrian in England*. We do not get a picture on this scale from Mr. TADEMA often, and are prepared with a welcome. Unfortunately, however, the painter is not at his best this time. There are all the perspective "dodges," the illusive vistas and realism of constructive facts, the eccentric defiance of ordered composition, the accidental introduction of the figures—here a head and there a leg, and there a whole form—and there is a great amount of archaeologically accurate and beautifully painted detail. But for "a' that, and twice as much as a' that," the picture is not interesting, and HADRIAN and his suite at the top of the open staircase, spite of imperial purple and correct accessories, are not vital personages. The attendant bringing up a tray of specimen pots from below, and whose head and shoulders appear abruptly half-way on the stair, does not serve the purpose of projecting the foreground with a force that shall send into truth of distance the glimpse of the potteries seen far below. It has been irreverently remarked that the scene looks rather like the visit of a noble "taster" going the round of the early British club-houses. The waiter of the period brings up the soup, the cook's seasoning shelf is palpably revealed in the bracket with the onions on it, and down below the menials of the kitchen are hard at work preparing savoury messes. Mr. TADEMA is so successful a painter, and so sure of the respect due to his great talents, that he may without discomfort bear such *persiflage*.

Two Academicians of long standing as public favourites have done well this year, first, Mr. GOODALL, R.A., in a brilliantly-painted interior, *A New Light in the Harem*, of which the motive is the delight of a languid Eastern mother in watching the infantine graces of her first-born, laughing and

kicking on the floor in genuine babyish fashion. Also in a scenic but impressive canvas, on large scale, depicting the *Flight into Egypt* by solemn moonlight. Then Mr. THOMAS FAED, R.A., shows the stronger side of his domestic style in the picture of a lonely little girl, gazing into the fire, building up a child's castle in the air. *Of what is the Wee Lassie Thinking?* says the title, and the suggestion is artistically expressed in the figure, which has the merit of being well placed upon canvas and soundly painted.

The group of painters who have made Venice their headquarters, and the incidents of modern Venetian life of the people their subject-matter, CECIL VAN HAANEN, HENRY WOODS, A., and DE BLAAS send some exceedingly clever pictures. Mr. WOOD's work has, to our thinking, most charm, for the poetry of Venetian backgrounds and Venetian atmosphere enters into his scheme. VAN HAANEN is the most indubitably safe in his audacities of scintillating colour and complexities of line, while DE BLAAS shows an individual *chic* in his treatment. To the group a new aspirant for brotherhood appears in Mr. LUKE FILDES, A., whose single figure study of a *Flower Girl*, and large subject-picture called *Venetian Life*, a coterie of laughing, gossiping work-girls, plying their various avocations in the shade of an archway beside a canal, have both the motley palette and surface epitome of character in type and action that belong to the style, but by no means the skilful harmonies or studied relations of line which underlie what looks to a casual observer merely clever chance work. But Mr. FILDES is for his best advance too facile of brush and of artistic mind. Unless he will turn mentor to himself, and correct his draughtsmanship and paint with greater conviction, he will never rise above his present level. One outsider who has made deliberate advance year by year obtains this season something like a triumph of recognition. This is Mr. WATERHOUSE, who into his subject—a number of Oriental women squatting in a half-circle before a human head, or "teraph," *Consulting the Oracle*, which a female diviner seeks to hear from the dead lips—has put such well-considered skill into the drawing of expressive attitudes and heads, into the assortment of brilliant colours and rich fabrics, in the painting of curious detail, in the harmonising of all within the luminous shadow of a room shrouded from midday glare by lattice-work and blinds, that a large section of the art-loving and knowing pronounce this picture to be the picture of the year. There is certainly no more thorough and artistic work. Another admirable painter is Mr. SEYMOUR LUCAS, whom the Academy have looked upon with favour under the purchase powers of the CHANTREY Bequest, by buying *After Culloden—Rebel-hunting*. Troopers make sudden entry into a smithy, and interrupt three stalwart and defiant men of the forge in act of making a new shoe for the horse of a fugitive rebel. Mr. LUCAS has never done better work than in the study of these manly sons of VULCAN, and the whole thing, from the narrative point, and for sound, crisp technique, is capital.

In the way of decorative or ideal art not much is to be found. It is, however, a hopeful sign of the times that Mr. A. MOORE's large decorative picture, *Reading Aloud*, which we noted in speaking of the Grosvenor Gallery, should have been assigned a good place on the line; but we see no indication of any competition with the painter in art of this *genre*, although of subject easel pictures, treated with a view to their place on the walls or in the panelling of a room, there is no lack. Mr. LINTON exhibits the last in appearance, but the first in serial order, of his pictures illustrating the career of a soldier in the Middle Ages. *The Declaration of War* shows a Venetian prince refusing with scornful gesture the terms of some Oriental potentate, whose long-robed envoys bow before the dais in dignified acquiescence. Beside the prince stands the knight whose subsequent wars and triumphs form the subject of the series. In some respects this picture is the best of the set, satisfactory in composition, with more of life and less of the lay figure in the *dramatis personæ*, and excellent in the arrangement of variegated and isolated colours. Mr. LINTON at any rate paints with a purpose. He is in earnest over the narrative setting forth of his motive, but never forgets the work of the artist in the office of the story-teller.

Mr. POYNTER, R.A., is the only painter within the Academy who sends a study of the nude *Diadumenè*, a figure on a small scale, solidly and brilliantly painted, with elaborate architectural background. Mr. POYNTER's other contribution is a portrait—and a very ill-favoured one—of Dr. Barry, Bishop of Sydney. Portraiture, of course, is liberally accommodated on the walls,



for here a double power works on the committee of selection ; first, there is the honour due to the artist, and next the honour due to his subject. Sometimes, however, an accident will close doors on both issues, and we are sorry this has been the case in Mr. WILFRID LAWSON's excellent portrait of *The Speaker*, which on both counts might have been thought safe of entrance. By another untoward circumstance the chief picture of the year from the studio of Mr. WATTS, R.A., *Love and Life*, arrived too late for the Academicians' sending-in day, and the arbitrary rules of the body could not be broken, even for one of their most important members. Let outsiders take heart of grace ! Even one of the sacred forty has to bow to fate. To return to portraiture, there is the broad and simple treatment which concentrates all power into the portrayal of the individual, without anything in the way of decorative accessory or elaboration of background. Mr. MILLAIS, R.A., in his portraits of men, Messrs. OULESS and F. HOLL, and, "with a difference," Mr. HERKOMER, are masters in this mode, mostly painting men, and giving strong character study, with more or less artistic management, and more or less vigorous technical excellence. Mr. OULESS's diploma portrait of his brother Academician, *Mr. Hodgson*, is a capital instance of this style of portraiture. Then there is the fancy domestic mode, as when Mr. JOHN COLLIER paints, in a very "cheeky" way, the three *Daughters of Colonel Makins, M.P.*, having a game of romps, one sister prone on the floor, while the others pelt her with flowers ; or the simple domestic treatment, as in Mrs. L. STARR's graceful and beautifully-painted portrait of *Lady Nicholson*, in a red plush dress, seated at a library table, with tasty knick-knacks about and carved panelling behind, or many of Mr. SANT's drawing-room pictures of ladies and children. And there is the portrait in character, a style in which Mr. PETTIE, R.A., has from time to time done some excellent bust studies, turning out his friends in the guise of warriors or nobles of past days, when men clothed their persons to greater advantage for dignity and picturesqueness. In ladies' portraits, too, we get something fanciful as well as faithful, by clever use of the costume of the period in its prettier aspects, as in the *Portrait* of HENRIETTA MONTALBA, by her sister ELLEN, in white satin, with the long dark hair hanging in a long plait, or *Mrs. John Rose*, by R. J. GORDON, in a sort of shot-red pinafore dress. Yet another treatment may be cited at risk of wearying the reader, in the clever full-length of *Mrs. John White*, by the young Parisian-American, JOHN SARGENT, an impressionist of a special order. The manner is sketchy to verge of the "blottesque," but the figure is deftly thrown into the round, upon a background meagrely furnished, by emphasising the high light on a long sweep of white drapery, and the face, in spite of an inkiness in the shadows, is *vif* and agreeably pronounced. The colour is kept to silver greys, with a touch of pale red. The mannerism is clever, and rather taking when sufficiently coherent. That it can be anything *but* coherent, let anyone judge by the portrait from Mr. SARGENT's brush in the Grosvenor Gallery.

#### NOTES FROM PARIS.

IF a logician wished to write a companion to Dr. Whately's "Historic Doubts Respecting Napoleon Buonaparte," he could hardly find a more fitting subject for his essay than the statue of *Liberty*, which was said to have been designed for New York by M. Bartholdi. Descriptions were given of all the details of the work ; its size and weight were compared with other statues, and even the rivets were counted ; but, with the exception of the engravings on advertisements in Europe and America, there seemed to be no evidence of the figure itself. The traveller to New York looked for it in vain from the steamer, and it was no less invisible in Paris. It is not surprising that many believed the statue to be a myth. In spite of logic, Napoleon did live in Paris ; and it is no less true that the statue of *Liberty* now stands upright, free from scaffolding or exterior support, in a founder's yard in the Rue de Chazelles. It may be seen by every one who passes along the Boulevard de Courcelles, towering above some of the houses. The smallness of French kitchens is a surprise to English cooks, and it appears almost incredible how such a work could be produced on premises that are so limited in area. The explanation is, that the statue is made up of about three hundred separate plates of copper, which were beaten to shape on a mould, numbered, and fixed like those in an ordinary iron structure. It

can be readily examined, as a staircase leads from the door in the right foot to the chamber which forms the head, and through the openings in the crown Paris can be surveyed. The ascent suggests a visit to a large gasholder in course of construction, especially as the rivet-holes in the plates through which light enters have been punched in square lines. The figure is stiffened throughout by lattice girders, and elaborate calculations have been made in order that the structure may be adequate to resist American storms. The copper plates are strengthened by iron bars, which are bent into the form of the folds of the drapery, and are united with the girders. That engineering skill was as necessary as the sculptor's art in order to produce the figure is evident when it is said that the total height of this combination of thin copper plates and iron, measured to the top of the flambeau in the right hand, is 46 mètres, or about 150 feet ; the height to the top of the head being 34 mètres, or about 111 feet. The pedestal of masonry on which the figure will stand will be 82 feet high, and before long New York will thus possess a Colossus 232 feet in height, or 30 feet higher than the Monument in London, and double the height of the great statue of *St. Charles*, by Cerani, at Arona. Considered as a work of art, the statue is entitled to great praise, and no better description of it can be given than the words uttered by an enthusiastic rivetter—"C'est magnifique !"

Before these notes reach London Madame Sarah Bernhardt will have attempted the representation of Lady Macbeth. The experiment is watched with no little interest by some among the English in Paris, and by many Frenchmen. The old notion of Shakespeare's lawlessness in the drama is no longer universally accepted, although to a Frenchman, who has been taught to believe in the unities of time and place, there are in the plays many things which are puzzling. Several translations of Shakespeare into French have been published, and the humbler class of students can obtain prose versions of eleven of the principal tragedies and comedies for a few pence in the "Bibliothèque Nationale," a series of reprints which has no counterpart in England. It will be said that Madame Bernhardt has not the physique that is requisite for the character. If tested by the imposing standard which Mrs. Seddons created (and which is so often badly copied), Madame Bernhardt will probably be found wanting. But Thackeray, who knew womankind almost as well as did Honoré Balzac, has said that Shakespeare's Lady Macbeth, which is not necessarily the tragedy-queen of the stage, was a weak woman, otherwise she would not have walked in her sleep, and have revealed her husband's misdeeds. Regarded in this way, there will be no inadequacy in Madame Bernhardt's appearance, and her interpretation of the *rôle* may hereafter satisfy English critics. But there is one point which must excite curiosity beforehand. Someone wrote an article on the deaths of men, women, and children which are described in Dickens's novels. What a volume could be produced if a psychologist would analyse the death-scenes which Madame Bernhardt has gone through with a realism that has been derived from clinical study ! In Shakespeare's tragedy we only hear the wail of the woman when there is an end to the queen's remorse in this world. Will M. Richepin, who has prepared the version for the Porte St.-Martin, adhere to the text, or is a scene which the poet has veiled henceforth to be revealed to men's eyes ? "Nous verrons !" That care will be taken with the tragedy is evident from the somewhat uncommon circumstance that Madame Bernhardt's theatre has been closed for a couple of nights to give opportunity for dress rehearsals.

All the world over the kindly feeling which, in spite of rivalry, artists have towards one another finds expression whenever there is the opportunity. One of these occasions was the auction which was held on Monday, Tuesday, and Wednesday of the paintings and sketches left by Ulysse Butin. They were supplemented by works which, as the placard stated, had been "offerts par les artistes aux deux orphelins d'Ulysse Butin," and the list of donors comprised almost every name of note in French art from Mdlle. Abbema to M. Yon. Any man who could buy the gift would have attained at a stroke a representative collection of modern French art. The little girl, by M. Bouguereau ; the mounted soldier, by M. Detaille ; the trumpeter, by M. de Neuville ; the primitive warrior, by M. Luminais ; the child sweeping, by M. Edouard Frère ; the peasant woman, by M. Julien Dupré ; the fauns, by M. Arcus, M. Dubufe, and M. Maurice Leloir ; the ballet-girl, by M. Comerre ;



and the sketch of a woman, by Madame Lemaire, were gems worthy of any gallery. It is now common to employ a child's tambourine as a material for a *fantaisie*. To be successful requires dexterity in the use of colours nearly dry, and the utmost quickness, otherwise the parchment will become wavy. Trifling as it may seem, tambourine painting is not a bad preparation for fresco work. A delightful example was contributed by M. Firmin Girard. The statuettes in bronze, marble, and porcelain were exquisite, and there were some fine drawings on wood blocks by the late Henry Regnault, who was a collaborateur with Butin. If a painter had not a cabinet picture in his studio he sent some of the sketches in his portfolio: thus, for example, M. Vibert gave the pen-and-ink drawing of the choristers, which a few years ago was reproduced in *The Architect*, and M. Baudry gave one of those studies for his figures in the Opera House which are accepted as canons of form by students. The generosity of French artists, whenever there is an appeal for aid, is always to be relied on, and the public are on those occasions liberal in giving prices. On the first day the sum of 85,658 frs. was realised.

There is no doubt that if Butin had lived a few years longer he must have been a rich man. He had made his mark, or, in other words, the public assigned him a speciality. Butin had only to paint fisher-folks and sea-scapes, and patrons were ready to compete for his canvases. His pictures are apparently mere transcripts from every-day life, but the exhibition of sketches demonstrated how great was the toil which the brave artist underwent in order to produce the simplest scene. Butin lived in the fishing villages, and nearly all his work was painted out of doors. If an action struck him as appropriate he watched it again and again, and faithfully recorded any new trait he could perceive. His finished picture was, so to speak, the characteristic idea which is exhibited under diverse circumstances. What can be simpler than the well-known figure of the fisherman carrying an anchor on his back? But a comparison of his studies will reveal the fact that Butin observed many a man thus burdened before he attained his end. His studies were not in crayons only; often they were elaborate works in oils, and it would seem to have been his practice to carefully arrange all the parts of a picture on canvas, and then keep the work for consideration before he took up that canvas which was to be shown to the public. It would be difficult to discover better examples of the thought which is needed in order to make a picture out of a commonplace incident, or to convert prose into poetry, than the sketches which remained in the studio of Ulysse Butin.

The opportunities for employing artists are so much more numerous in Paris, it is not surprising that, somehow or other, a French artist is rarely in absolute impecuniosity—unless it be through his own fault. If there is no market for his pictures he can make designs, if it were only for industrial purposes, or apply his pencil to some kind of decoration. One of the latest ways of utilising art is the introduction of etched menu cards. In England it is possible to obtain cards in black or in many colours, which some people consider to be very fine; but the best among them are manufactured in America, and are mere specimens of mechanical engraving, and, one might add, of mechanical designing. They are to be had in thousands, and are sold to hotel-keepers as well as to hosts who wish to make a display. A Paris gentleman can without any difficulty obtain an etched card that will be not only worthy of admiration for its beauty, but which has the advantage that the design is not to be seen at any other table but his own. The plate can be his property in the same way as the plate of his visiting card. Many of the etchings are works of art, and the quality is simply a question of price. Etching on copper is not much more difficult than etching on paper. The process is restricted in England to expensive pictorial works, while in France it is used to transform simple things into objects of beauty.

The exhibition of the works by M. Meissonier, which was opened in M. Petit's gallery on Friday, the 23rd inst., contains ninety-one pictures. Some have been lent from English galleries. The Queen has sent *La Rixe*. Sir Richard Wallace's collection, which is one of the richest in works by the artist, is represented by *Les Bourgeois flamands*, *Les Amateurs d'estampes*, *Partie perdue*, *Le Décaméron*, and *Le Guetapens*. There are also a *Portrait de Meissonier* and *Recherches littéraires* from M. Gambart; *Un*

*officier de mousquetaires* and *Le Porte-Drapeau*, from Mr. Duncan; *Le Portrait du Sergent* and *Les Joueurs d'échecs* from Baron Schroeder, and *Regnard dans son cabinet* from Mr. Price. The works which M. Meissonier has lent are *Les ruines des Tuileries*, *Le Chant*, *Le Graveur à l'eau-forte*, *A la fenêtre*, *M. Thiers sur son lit de mort*, *Les Tuileries*, *Intérieur de l'église Saint-Marc*, *Portrait d'homme*, *Intérieur flamand*, *La partie d'échecs*. The money received from the visitors, which is sure to be a large sum, is to be handed over to a charitable society which has charge of a night refuge.

There will be a sale of drawings and paintings by M. Berne-Bellecour at the Hôtel Drouot, on Thursday next. This artist, like M. Detaille and M. de Neuville, devotes himself mainly to military subjects. The catalogue for the auction is small in size, but as it has *photogravures* of some of the pictures, amateurs are willing to pay ten francs for a copy.

The roadway of the Pont des Arts, which connects the Place de l'Institut with the Quai du Louvre, is being renewed. The bridge is used only for foot passengers, and is very often introduced in sketches of Paris life, for one may encounter on it influential politicians who prefer to walk to the Assembly by the quais rather than by the gardens of the Tuileries, renowned members of the Académie, and humble students of science and art hurrying to the Quartier Latin or the Rue Vaugirard. One-half the bridge is closed to traffic. The removal of the roadway shows that the iron ribs which form the arches are of rather slight dimensions, but the bridge sustains an immense traffic throughout the day, and it has been crowded on occasions. There is a strong timber superstructure of longitudinal and transverse bearers, and over all is a coating of asphalt. The bridge was erected in 1803, and until 1848 tolls were levied on the passengers. One of the outer arches was removed in 1852 for the enlargement of the Quai Conti.

It is hardly creditable to English taste to find Mr. J. C. Robinson, F.S.A., bringing his collection of Renaissance medals to Paris in order that he may sell them. There is, of course, but one meaning in the transaction, namely, that there is a more profitable market here, because the people are better able to appreciate that class of sculpture. If the question is asked why the difference should exist, an explanation is easily found. The production of medals is still practised in France; collections of them are found in every museum; there are many dealers, and even the poorest can obtain a copy of a gem from one of the boxes on the quais. What is more important, there are courses of lectures on medals as well as on other subjects, which elsewhere are supposed to be the property of a few connoisseurs.

It would be difficult to find critics whose eyes are more keen than those of French journalists. They are always putting something or other under the microscope, and startling the public with discoveries. It has just been asserted that the popular novel "*Le Maître de Forges*," which has been dramatised and is being played successfully at the Gymnase, with Madame Bernhardt's husband in the principal rôle, is little more than a translation from the Swedish. Another surprise has been found among the pictures purchased by the State at the Salon. It is said that M. Dantan's *Modèle d'atelier* is only a translation to canvas of a photograph. But the picture has none of the stiffness that is almost inevitable when figures are posed before a lens. May we venture to suggest an opportunity to the French critics which they have somehow overlooked? Let them compare an old photograph of the Duchess of Teck bending over one of her children with the pleasing *L'Amour maternel* by M. Saintin, and they will have a subject in which they can revel.

**Bristol.**—The new building for the Capital and Counties Bank in Baldwin Street, Bristol, is now nearly completed. It has been designed and erected under the superintendence of Mr. F. Mew, architect, Doughty Street, Mecklenburgh Square. Mr. Honey has acted as clerk of the works, and the builders are Messrs. W. Cowlin & Son, Brunswick Square, Bristol. The frontage is built of granite up to the first floor. The floors are concrete, and the walls are in Staffordshire brick, with cement. The ceiling is fire-proof, and built by Messrs. Dennett & Ingle, of London.



## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AN ordinary meeting of the Institute of Architects was held on Monday evening, Mr. Ewan Christian, president, in the chair.

The SECRETARY announced the death of Mr. Edwin Nash, who had been a Fellow of the Institute of long standing.

Mr. FOWLER said that he had had the pleasure of personally knowing the late Mr. Nash, and that he should not wish the announcement of the death of a member so well known, and a friend so valued, to pass without a word in tribute to his memory. That gentleman too, while health had permitted, had been a constant attendant at their meetings, and taken part in the discussions, to the benefit, he thought, of them all.

The PRESIDENT said he cordially agreed with what Mr. Fowler had said of the late Mr. Nash, and then added some remarks of his own testifying to the professional worth of the deceased gentleman.

Mr. WILLIAM EMERSON then read a paper, of which the following is an abstract:—

**Description of some New Buildings at Allahabad and Bhow-nuggur, India, with Remarks on Domes and the mingling of Styles of Architecture.**

There were various points, Mr. Emerson said, to be considered in arranging buildings suitable to Indian purposes, points which architects were not brought into contact with in England, and which involved such differences in construction as to make it a delightful experience to leave the old highways of English architectural thought and to work for a while in India. These points were chiefly the climate, with its intense heat and its total rainfall, almost incessant, but limited to a few months; next, the habits of the Oriental, which made it hard for him to work save in the accustomed grooves of his ancestors; lastly, the innovation of modern Western thought, and, it might as well be added, of science and culture so opposed to all the antecedents of the conservative Hindoo and to his caste prejudices. In Allahabad the average heat was from 85 degrees to 98 degrees in the shade. At Nassich, in tents under the mango trees, he had experienced 120 degrees of heat. Hence the necessity for elaborate means of ventilation, for verandahs, and for walls shaded by overhanging eaves. This arrangement gave a character to Indian buildings quite unlike that of our western ones, and affording the architect scope for picturesque dealing with light and shade unattainable in England. With regard to the habits of the Oriental workman, it was shown in detail how much the English architect has to put up with in India, how completely he must possess his soul in patience, unless willing to run the risk of death by heat apoplexy. Mr. Emerson had to allow for a considerable percentage of defective workmanship, as was illustrated by his plans for a church and for the Muir College, both at Allahabad, and for the Takhtsingji Hospital at Bhow-nuggur. As to the style of architecture to be adopted by the English in our peninsular dependency, Mr. Emerson accepted, with some modification, the conclusion arrived at in Mr. Chisholm's last year's paper, "that an architect practising in India should unhesitatingly elect to practice in the native styles." The present reader's later idea was that buildings erected under the British Raj for any purpose connected with the natives, whether for government, education, or charity, should show a distinctively British character, at the same time adopting the details and feeling of the native architecture, and suiting it to the requirements of each particular case. In answer to the objection that this would create a hybrid style, it was asked whether the mingling of Mahomedan and Hindoo art had not resulted in some of the most enchanting buildings of the world, as exemplified at Bejapore and in the North-West Provinces. In Europe, also, were there not buildings as noble as any in the world—for instance, St. Sophia's at Constantinople—which were hybrid in style? Other examples were the Palermo Cathedral, the San Miniato at Florence, the interior of St. Mark's at Venice, and the apse of our own Canterbury Cathedral. Indeed, were not the loveliest flowers and plants hybrids? and had not the intermingling of the different human families produced the noblest types of men? This was Mr. Emerson's apology for the architecture of the Muir College and of the Takhtsingji Hospital, which he felt must be described as hybrid. These buildings of his carried out, as he proceeded to show at large, his idea of impressing the stamp of the British Raj on modern English erections. Some sketches of Indian details, which he exhibited, explained whence he got his inspiration. Though for the most part from Mahomedan buildings they were nevertheless of Hindoo origin. That from the fort at Agra was certainly old Hindoo work re-used by the Mahomedans, and so was the column from Bejapore. The decoration from Pashan was also Hindoo. One of the most interesting points to himself in these Indian works of his, Mr. Emerson said, was the chance of introducing domes—a chance rarely falling to the lot of an architect practising in England. In the dome over the hall of the Muir College he had taken the type of the Taj Mahal for outline. He described his own dome, instancing the points of resemblance and difference between the two. He added a comparative account

of the library dome of the college and of the hospital dome. After a comprehensive survey of the principal domes in east and west, Mr. Emerson said it seemed to him that the highest perfection attainable in the construction of a dome would be a combination of the arched pendentive arrangement of Mahmoud's tomb surmounted by a circular dome of the conical section of St. Maria at Florence, or that of the tomb of the Shah Khoda Benda, with a slight additional bulbousness of the haunches and a weighty cornice hung inside about one-third of the height above the springing. Part of this idea was in his mind when he designed the dome over the Sitzungsaal in the competition for the Berlin Houses of Parliament. In this case he proposed supporting the large lantern by flying buttresses over the dome rather than by a double shell. One good point of this construction internally would be that the spandrels would offer such advantages for mosaic or fresco, being at an easy angle of vision—an important thing at a great height. He believed that with Portland cement concrete and a network of galvanised iron or copper embedded in it, to supply the fibre lacking to concrete, the upper part being composed of an aggregate of light specific gravity, with heavy material at the base, we might construct perfectly stable domes of larger size than any ever yet built, of more effective external and internal design, and of comparatively light weight. Internally the dome was by far the grandest and most impressive method of covering a large area. There was a mystery about the gloom of the interior of a vast cupola that well suited the imagination of an Oriental. And in all great architecture there should be a certain mysteriousness. He had read that a science without mystery is unknown, and a religion without mystery was absurd. He felt sure they might add that architecture without an element of mystery is unpoetical and unimpressive. It was this quality in our great Gothic cathedrals, caused by the ranges of columns, arches, and vaults, that was the chief reason of their attractiveness, but they lacked the feeling of immensity and spaciousness given by the dome. Yet a dome should not be too light nor its vastness too easily penetrated. He thought the effect of St. Peter's was marred by this. The interior of St. Paul's was on this score more effective. Some would ask, How about the decoration? Well, the decoration of St. Peter's was too plainly visible, and if St. Paul's should be treated correctly by means of well-designed subjects with strong outlines, devoid of dark shadows, and rendered in the brightest glass mosaic, it would be quite visible enough down below, with enough of the mystery emblematical of all spiritual and heavenly things. But for decoration in such a position the colours must be brilliant, for the joint effect of distance and the atmosphere would be to dull an emerald green down to grey and a bright vermillion to dingy red. Mr. Emerson said he had often wondered why our architects who had had the chance had never erected a dome in connection with a Gothic church in England. It was not needless, as was proved by our enormous congregations, many of whom could neither see nor hear on account of the blocking up of the lungs of the churches with the enormous piers. He wanted to see a magnificent Gothic interior opened up after the manner of the Duomo at Florence, and numbers of other Italian churches. But he could not see why the grandest of all features should be almost exclusively found in Classic and Oriental work. There might be certain difficulties to be overcome, but nothing insurmountable, and with the earlier types of transitional architecture the dome would perfectly harmonise. Might it not happen that in such an endeavour to blend Classic and Gothic we might strike the architecture of thirty years hence, as hinted by Professor Kerr in his interesting paper read a few nights ago? Let it be a Renaissance suited in every way to our modern requirements, not such as Italy saw in the fifteenth or sixteenth century, but a Renaissance of the mingled spirit of Classic and Gothic exemplified in some such works of an earlier century as he had already mentioned. The desiderated Renaissance was one with arms long enough and bold enough to embrace the lintel, the round arch, and the pointed arch, the picturesqueness of the Gothic vault and the dignified nobility of the Classic and Oriental dome, with an elimination of the crudities of Gothic art, and an enrichment with the graces of the Classic style. Before such an architecture a style which worshipped nothing but quaintness, whose ideal of nobility was only the picturesque, and whose detail and sculpture were debased and meaningless, might surely vanish into the haze of oblivion from which it was evolved. But he did not yearn after a Renaissance whose constructive element was iron. That might suffice for bridges of thousands of feet span, for earthquake-proof buildings, for fireproof roofs and floors, for girders, ties, and cement. An architecture to be noble and impressive must not be wanting in mass, and an iron edifice was but a skeleton wanting the clothing of flesh and skin to give it life and beauty. We called that a human skeleton from which soul had fled, and on the same principle an iron architecture would be found to lack the nobility of a living art.

A discussion followed the reading of the paper, in which Mr. Chisholm, Mr. Aitchison, Professor Kerr, Mr. Woodward, Mr. Stannus, and Mr. Tarver took part. Many of the remarks passed accorded very generally with those made on previous occasions when the subject of domical construction has been in question.



The points of interest will be found treated of on another page. The proceedings were terminated with a vote of thanks to Mr. Emerson for his paper.

### CATHEDRAL PLANNING.\*

ENGLISH architects seem to have grasped with a firm hand the artistic qualities of the cruciform plan. Lincoln Cathedral is an example, and perhaps it might be difficult to find one more complete in itself or more typical of our national peculiarities. As a mere ground-plan it is a work of fine art, well-proportioned and interesting, with beautiful forms employed about it. The foot of the cross is sufficiently deep to balance its great length, being formed by the two western towers and transepts. These latter are of little or no use to the nave as transepts; both are closely screened off, and used for the independent purposes of a morning chapel and a consistory court. They have still less to do with the elevation being only of the same height as the side aisles; but they have a distinct architectural value on plan. The nave has seven bays, the two westernmost being narrower than the others, originally without doubt because it was built from the choir to meet the older Norman work of the front. The Norman nave, as seen between the towers, was narrower than the present one. But these two narrower western bays bring the transept vaults, of equivalent width, into harmony and connection with the side aisles, and are beautiful specimens of groining. The dimension of these two nave bays governs the projection of the transepts, which we feel to be the just one, as it has base enough to balance without rivalling the great crossing. If we were dealing with a cross in upright elevation, the base would bring the cross on to the ground-line, which carries the eye away beyond the projection of the arms. The screens which divide the nave from the chapel and consistory court are original work, not later additions. Notice their value to the whole plan. They carry the nave at its normal width past the transept, till it butts against the towers. Though the transepts only effect a junction with the side-aisle vaults, and do not pass the main arcade, the nave would have been shortened and its proportion to the whole lost, besides the creation of a western rival to the great transepts, had these low stone screen walls been omitted from the plan. For the sake, therefore, of its hidden beauty, and also for that of the architect, who brought the older building into union with his with such consummate skill as to make a perfectly-proportioned plan out of two incongruous parts, we trust that these screens may yet long escape the hands of the "unbroken vista" lovers. Before leaving the west end, observe how artistically the octagonal turrets turn the corners of the front. They are poised in an unusual way, having but little projection on the front and considerable at the sides and back. This may be merely because the front pre-existed of a fixed width, which did not agree with the dimension that governs the western transepts. In all probability, one of ourselves—a modern architect—would have made our transepts extend just a trifle more, so that the pinnacles should stand at the exact angle of the building, but then the valuable "claw" they exercise on the plan would have been lost. As they stand they furnish fixed points from which we can comprehend the scheme of the base.

Peterborough has a small plan with a simple outline, as there is distinctly no feature to interrupt the cross. It is in this simple completeness unique, and contrasts remarkably with the plan of Lincoln. Its proportion as a whole is good. If there is a fault, it is that the upper part of the cross is a trifle too long. Half the width of a bay of the Lady Chapel might be spared. In nearly all English plans, whatever may have been the original length determined on, subsequent alterations have pushed the building eastwards, generally with the happiest effects, as this otherwise inordinate extension of the upper part was made proportionate by such successful expedients as choir transepts, or by a diminution of width in the presbytery, or by a more considerable one in the Lady Chapel beyond; also by the accentuation of the main crossing, with the same purpose in view as at Ely and Winchester. The western transepts, which form the *raison d'être* of the Peterborough façade, are like those of Lincoln in one respect, being of little projection in proportion to their depth, their dimensions being the width of the side aisles. They are divided from north to south by the wall which gives recess to the front and produces a marked effect on plan. It reduces the western transepts to a width which makes them a base or plinth to the cross. At Lincoln the base to the cross is formed by the square subdivided masses of the towers; the western transepts counterpoising the greater transepts with the entire length of the church, the screen walls purposely preventing the foot or plinth of the cross from being realised in order to preserve the effect of the nave. The Peterborough nave is long enough, and the transepts consequently can become not merely an external counterpoise to the other masses of the building, and be partly absorbed by the nave, but have a definite relation to the idea of the cross at its foot. The total depth is just as necessary to the

whole, and what is superfluous to the plinth is cut off by the cross wall and becomes the glorious recessing to the arches of the façade. This is the secret of the mystery of the front. Anything but a hollow sham having no relation to the whole, it is, in fact, the result of a masterly and beautiful plan. The towers which bound the front are delicately and subtly stepped forward with almost the effect of a curve, and form the lower feet from which the cross rises firmly and gracefully, the broad splaying of the arches and the recesses behind aiding this impression. The later porch which projects beyond is fortunately cut off on plan by the recesses. Peterborough is the only cathedral plan I know that can be looked at in upright elevation with entirely satisfactory results.

Salisbury, though on a smaller scale, is a plan of similar proportions and scheme to Lincoln, but without the western transepts. It was built a short time after the nave of Lincoln, in 1220. It is a double cross having transepts of the same relative projection, and there is but little difference in the proportionate lengths of the choir and presbytery. The scheme of the cloister and chapter-house is also similar, but they are in a position which the exigencies of the site did not permit at Lincoln on the south side of the nave, the more usual position. To a certain extent perhaps this position may give a finish or balance to the western end of the cathedral on the south side, but something seems needed on the north. The porch would scarcely supply the need or be important enough for the position. The length of the nave without being interrupted needs the balance and base that the western transepts give to Lincoln. A comparison between the two cathedrals in these particulars is the more justifiable, as both the west fronts are designed on the same principle, being façades, distinct architectural compositions complete in themselves, with corresponding turrets at the ends. These turrets are not pitched on the intersection of the front and side on the "correct angle," but are placed as terminations to the front, though they have not enough projection in spite of this on the plan to furnish us with the points that the Lincoln turrets give, and we consequently miss its completeness and beauty in this respect. A visitor to Salisbury feels there is a lack of interest at the further end of the nave, especially after turning from the choir; it seems too long a walk. It cannot be that the architect was unwise enough to design that this impression should be produced to increase the effect of his west front *tour de force* awaiting one beyond the welcome door. It must be remembered in criticising Salisbury that it is practically the work of a single mind and generation, being one complete erection, at all events as far as the plan goes. This is scarcely the case with any other of our Mediæval cathedrals.

Winchester has a small Lady Chapel terminating the east end, like Salisbury, but has only one grand transept, and no projections at the west end. It does not seem to feel the lack appreciably, as one fears, that the interesting proportions of the chancel should be damaged. At Salisbury the double transepts brought the projection along the body of the plan in a swelling gradation. The east end of Winchester is sufficiently removed from the great transepts to be independent of them, and complete in itself, and in its relation to the entire length of the plan.

Durham has a burly massiveness in plan, true to the character of other aspects of the building. The so-called chapel of the nine altars (I cannot but think it should be seven) crowns the cruciform, as one did once at Lincoln and Fountains, in a complete and final manner, but subservient to the central transepts. The nave is finished by the slight projection of the western towers, that seems the exact amount required to balance the whole without disturbing the mass of the east end.

Ely as a whole is simpler in outline than any we have been considering, though we bear in mind the extraordinary feats of constructive skill and beautiful design wrapped up in it. The nave, choir, and presbytery are unusually long and wide, but well balanced by the great transepts, comparatively short in projection. The design of the west end is unique—narrow but massive transepts, with a small apsidal chapel, nestling against the south side of the nave. I am inclined to think that the design contemplated a corresponding chapel on the northern side. This little chapel gives the transept depth enough to balance the plan, and being low, plays no prominent part externally. The chapel has here exactly the same object to attain as the screen walls at Lincoln. Though the two plans are different in almost every particular of design, we see that the architect had the same result to attain, and succeeded by a different method in each case. Five turrets nearly circular on plan complete in a magnificent manner the design of the transepts, and make Ely an interesting example of western transept planning. The Galilee porch interferes slightly with the happy result, owing to the great thickness of its walls necessitated for abutments to the arches that carry the central western tower. This was not the case with the Galilee at Durham, as the walls were not too thick to look delicate on plan.

Leaving strictly English examples, Westminster, in spite of its general tendency to depart from national types, is English in having a plan that is complete and beautiful as a whole, the base of the western towers having enough projection to make a satisfactory termination to the nave. Sir Christopher Wren's plan of St. Paul's has western transepts which are not quite happy in proportion. They seem either too large or too small, too large and

\* From a paper read by Mr. A. B. Pite at the eleventh ordinary meeting of the Architectural Association.



deep for the length of the nave, and not far enough for the great transepts to aid their proportion. The nave could not well have been lengthened, as its huge arches would lose scale by further repetition. The western transepts seem too small, when we realise that if they had been equal in size to the great arms of the cross the nave would have been perfectly balanced, though this would have been a departure from the proper cruciform plan. We find this carried out in the plan of Minster Cathedral, a building though small in comparison with St. Paul's, more huge in scale. The nave consists of two spans. The eastern and western transepts are the same in size, have but little projection, and are of the same width as the nave. Their size, however, does not interfere with the latter, which passes through the eastern crossing into the chevet, and through the western for an equal distance to a porch. In the examples as yet referred to the western transepts have been connected with the façade, but at Minster they have no relation to such, the front being a gable between two simple square towers.

The cruciform plan produced long churches, as the crossing arms divided the length and gave interest to points in what, without them, would have been a mere corridor. Our architects who were content to trust themselves to the cruciform plan for a supply of sufficient interest and beauty, naturally found at the crossing the centre and most important part of the design. This is why they concentrated their powers on the design of those lantern towers which are the glory of our cities and ours alone. Their thoroughness in adhering to a definite scheme of plan has been amply rewarded. The continental architects, who either did not perceive the vantage point they possessed at the crossing, or were careless of it, produced no cathedrals which can rival the English in beauty and dignity of grouping. The fact that the square east end was the rule of our English practice has not a little to do with the emphasis given to the crossing; being conscious that the building could be terminated at any point to meet whatever proportion already existed, the transepts were lengthened and widened to group externally with the lofty tower, and give space and effect to the interior. The transepts, as a consequence, are much more important and valuable here than abroad, their repetition beyond the choir being most fruitful of artistic results. Both at Lincoln and Salisbury the choir transepts are of beautiful proportions, narrower, and of less projection than the great transepts, and seem based on a cross of which the choir forms the stem and the sacrum the head, their point of crossing being the top of the main cross, of which the other transepts are the arms, forming a cross within a cross, and yet maintaining their share in the whole plan. They effect a junction with the main vault, unlike their western brethren, the continuity of which is, however, undisturbed. Having been brought by their means now to the east end, we cannot but feel that there is no other possibly successful termination for the cathedral but a square wall, the rectangle having been the foundation of all the beauties we have been enjoying. And we have reason to be proud of the self-restraint our architects displayed in their way, and wonder what posterity will find of that quality in our own work.

I do not propose to refer to the transepts of foreign cathedrals apart from their apses and chevets, to which they are entirely subsidiary, though this brings us in contact with Westminster, where the transepts and chevet seem to maintain an interesting and ceaseless struggle for supremacy on plan. This is not visible externally, as, most wisely, the lantern-tower has not been built. The combination of a lantern-tower, of sufficient height and size to be proportionate to the whole building, and a chevet, has yet to be accomplished. St. Ouen, at Rouen, is nearest the goal, but the charming lantern is too small for the nave. Noyon is a rare example of a cathedral which, though of second or third-class dimension, is completely planned; the apsidal transepts are distinctly typical of French design. Soissons Cathedral has one such beautiful transept with an aisle, but owing to the lines of the site the northern transept has to be kept square. Noyon was originally united to the see of Tournay, the cathedral of which has apsidal transepts of much greater size with aisles, but they are too far from the chevet, and interfere with the nave. At Noyon, apart from the feeling of harmony that the three semicircles give to the plan, there is a great lack of correspondence in proportions. The transepts want enlargement in the direction of the nave, as they are overpowered by the chevet. St. Reim, at Rheims, is perhaps the nearest to successful treatment. Here the transepts are square ended, but have the usual apsidal projections on their sides nearest to the chevet. They are well known for the interesting puzzle solved in vaulting four bays on the west wall into three on the opposite. The church has a grand nave of thirteen bays, and this gives much dignity to the plan. The weak point is that the transepts want a little more width. The increased projection of the centre chapel of the chevet gives a beautiful apex to the plan, such a one as the pointed arch had brought the architect to look for. The smaller church of Notre Dame, Chalons-sur-Marne, is a happy proportion as a whole, the chevet not being too large for the nave, but the transepts are small. In fact, we find that the chevet was developed at the expense of the transepts and entire plan. The French architects did not display that balance of mind in planning which they proved themselves to possess when constructing their vaults. At Chartres we find the transepts of a good width, but shortened

considerably as the chevet has grown in size, and possesses two encircling aisles besides its chapels. The nave suffers accordingly, as it has only one pair of aisles, and is of comparatively small area. Notre Dame, Paris, has a beautifully complete plan, but the transepts have practically no actual projection beyond the line of the apse, which here, as at Chartres, has two encircling aisles and chapels besides, bounded by the semicircle of the apse. The nave has double side aisles and chapels between the buttresses beyond them, which makes it sufficiently wide to balance the great mass beyond, and produce a well-proportioned whole, but at the expense of the real transepts. The plans of Rheims and Amiens are other illustrations of the sacrifice of transept projection in consequence of the use of the chevet, which always asserted its claims to attention, to the detriment of other portions of the cathedral, and which, though based on the cruciform plan, hid and overrode its lines most unmercifully. The examples that we have of the use of Germany made of the chevet do not furnish us with any notable exceptions to the results that it produced in France. The chevet of Augsburg Cathedral is interesting because, being confined by the sweeping curve of the street at the east end, the architect did not permit himself to be deprived of the proportion to the whole that he wished to obtain by means of his apse; so he contrived to dispense with the real encircling aisle, and carried the walk into the main apse, across behind the reredos. The result externally is picturesque. Perhaps the most typical eastern termination is the use of three apses corresponding with the nave and side aisles, early and semicircular, at Brunswick, and semi-octagonal—like our bow windows—in the later work of Ratisbon. This latter cathedral is throughout of the most just and harmonious proportions, and the plan, though small in size and simple, is complete. The transepts have no external projection. The chapels on either side are nestled behind the screen walls, and have the sacristy and treasury beyond them. The cruciform which lies buried in the triforium is not apparent on the plan, the architect's sense of fitness cautioning him against its use with the apse.

## THE BLENHEIM COLLECTION.

AN application was made to the Chancery division on Saturday for the sanction of a sale of twenty-five pictures, comprising a part of the Blenheim collection, the whole of which consists of some 500 pictures. The petition has been ordered to stand over for a week. The following are the twenty-five pictures which have been selected for sale, and which are stated to be worth 400,000*l.* :—

1, Raphael—"Madonna Ansdei;" 2, Sebastiano del Piombo—"La Fornarina;" 3, Rubens—"The Three Graces;" 4, Rubens—His own portrait, with that of Helena Foument and infant child; 5, Rubens—Helena Foument attended by her son; 6, Rubens—"Venus, Cupid, and Adonis;" 7, Rubens—"Andromeda;" 8, Van Dyck—Charles I. on horseback; 9, Rubens—"Lot attended by his Daughters;" 10, Rubens—Bacchanalian subject; 11, Rubens—"Adoration of the Magi;" 12, Rubens—"Departure of Lot and Family;" 13, Rubens—"The Holy Family assembled in an apartment;" 14, Rubens—"The Return of the Holy Family from Egypt;" 15, Rubens—"Filial Piety" (*Caritas Romana*); 16, Rubens—Anne of Austria; 17, J. B. Weenix—"A Seaport in Spain;" 18, Rubens—"The Distribution of the Rosary;" 19, Rubens—"Suffer the Little Children;" 20, Van Dyck—Catherine, Duchess of Buckingham and family; 21, Van Dyck—Geneviève d'Wifi; 22, Mytens—Duke of Hamilton; 23, Van Dyck—Marie de Medicis; 24, Carlo Dolce—"Mater Do'orosa;" 25, Carlo Maratti—"Triumph of Christ."

## LICHFIELD CATHEDRAL.

THE preparations for the dedication of the west front of Lichfield Cathedral and the opening of the new organ on the 29th inst. are being rapidly pushed forward. Figures of the four minor prophets, Nahum, Amos, Obadiah, and Habakkuk, have just been placed in position, and the statue of King Solomon is now completed and ready for placing in position. The statue represents the king in full regal costume with the sceptre in the right hand and a model of the temple in the other. These figures are by Mr. Robert Bridgeman, sculptor, who has supplied about sixty of those already fixed. Space is allowed for upwards of one hundred figures. Statues of Richard I. and Edward III. are awaiting removal, and others will be ready before the dedication-day.

The Select Committee on the Parks Railway Bill have decided that the preamble of the Bill has not been proved. The Committee, however, will make a special report, and if they can approve of the principle of the Bill the measure may be reintroduced next session with an improved scheme of junctions, which is understood to be the point upon which mainly the present proposals have failed.



## NOTES AND COMMENTS.

THE Burlington Fine Arts Club have decided on a new departure, so to speak, by inaugurating an exhibition of drawings of architectural subjects by deceased British artists. In doing this the Burlington Fine Arts Club shows a desire no longer to ignore architecture, the highest of all the arts, a place among the arts in an art club. The club authorities by their own account decided that "an attempt should be made specially to deal with architecture as a branch of fine art." This decision would be easier to arrive at than to carry into practice, because the range of architecture as art is practically unlimited in its multitudinous phases, and recognises not the bounds of time or country, epoch or nationality. The sub-committee were, therefore, very prudently left to feel their way by easy steps under the words of the resolution, "drawings of architectural subjects by deceased British artists," and were allowed to interpret these words as they considered best.

SOME artistic aspects of the art are now presented to the public in the charming water-colour drawings of TURNER, PROUT, DAVID COX, and DAVID ROBERTS, along with drawings of the two COCKERELLS, BARRY, WYATT, EASTLAKE, SYDNEY SMIRKE, NASH, FERRY, the two PUGINS, PAPWORTH, STREET, and W. BURGESS. Some architectural designs have been hung in a room apart from the exhibition proper, and include designs by INIGO JONES—his design for the Palace of Whitehall for one; also designs by DECIMUS BURTON, including the original designs for the still incomplete arches at Hyde Park Corner, and again GRIMM's drawings of Cowdray House, near Midhurst, in Sussex. There are, too, drawings by the Brothers ADAM, &c., &c.

IT was hoped that it would have been possible to bring together a curious series of original drawings, illustrative of Sir CHRISTOPHER WREN's successive designs for St. Paul's Cathedral; the Dean and Canons having placed their collection at the disposal of the committee. But here, as at All Souls' College, Oxford, the Wren drawings are mounted in books, so that to exhibit them was not practicable. This interesting passage in the history of architecture has, however, some illustration in the copy by Mr. PENROSE of one of the All Souls' designs, and in two highly finished interiors of St. Paul's; also in SANGALLO's design for St. Peter's, and TURNER's superb *View of Ely Cathedral*, a design and building each of which is said to have afforded suggestions to WREN.

THERE is much genuine interest in the Exhibition, and sterling merit in most of the work that is displayed. The most distinct and valuable curiosity of the collection is certainly the display of drawings by INIGO JONES. They are about twenty in number. Two of them belong to the QUEEN, the rest to the Duke of DEVONSHIRE. The QUEEN's drawings are the original perspective views of the Westminster and river fronts of Sir INIGO's great palace. They are extremely elaborate, and will prove very interesting to the student of architecture.

THE Exhibition of Works in Wood at Carpenters' Hall, London Wall, is to be open to the public on and after Monday next. The two City Companies who have got it up (the Carpenters and the Joiners) are to be congratulated upon the result of their efforts, for both in extent, in the variety of the objects sent in, and in the excellence of the most conspicuous among them, it attains a very high level. The woods used in joinery and carpentry are illustrated by two series of excellent specimens. Models of roofs, floors, centres, staircases, doors, windows, and chimney-pieces are exhibited in considerable number, and in many instances the designs are ingenious and the workmanship good. A few models and other representations in wood of buildings are included, but none of them are very successful. A large display of inlaid work, such as table-tops, chairs, and cabinets, has been contributed, and much of it is very satisfactory. But the great feature of the exhibition unquestionably consists of the specimens of wood-carving. The prizes offered in this department have been keenly competed for, and the work to which they have been awarded is such as every visitor will examine with pleasure, both for its own sake and as evidence of the skill and taste of the carvers of the present day. The committee

have also been fortunate in securing the loan of much carving—ancient and modern—not in competition. This forms a most interesting part of the exhibition. Foremost in our estimation is a pilaster, decorated with masses of rich fruit and flowers, from the hand of GRINLING GIBBONS. This fine piece is fixed so near the eye that it can be easily examined, and the master's method of working can be studied. It is a rare example of breadth of treatment combined with the most highly-finished detail, exquisite modelling, and rich varieties in light and shade. A splendid mirror, and an almost equally rich mantelpiece, and a considerable number of smaller articles, speak to the skill of Mr. ROGERS, who has also lent some remarkable specimens of German Mediæval carving that are full of interest. A bird—the masterpiece of WALLIS—lent by Sir H. FARQUHAR, and several excellent specimens of ancient work—Italian and German—from the collection of Sir JULIAN GOLDSMID, should on no account be overlooked. The collection of drawings and prints is considerable, and includes some of great interest, and valuable as showing the goodwill with which the exhibition has been regarded in various quarters. Altogether the collection will be found well worth a visit.

A MEETING of the Edinburgh Architectural Association is to be held on Thursday evening, the 29th inst., on which occasion the closing lecture of the present session will be given by the President, Mr. DAVID MAC-GIBBON, who has chosen the interesting subject of Scotch castles and houses of the fifteenth, sixteenth, and seventeenth centuries for his lecture. The annual excursion has been fixed to take place on June 14, and will be made to Kelso and Jedburgh. This (Saturday) morning is devoted to a visit to the Forth Bridge Works, arrangements having been made for the purpose with the contractors, Messrs. TANCRED, ARROL & Co., and which will enable the members of the Association to inspect the structure during working hours. The afternoon arrangements comprise a visit to Queensferry Church, Barnbougle Castle, Dalmeny House and Church.

A NEW feature in art is the bird's-eye view of London as seen from a balloon, which is to be published in the *Graphic* next week, and which is sure to attract attention. Mr. W. L. WYLLIE, who is the artist, was accompanied on his balloon voyage by the well-known aeronaut, Mr. SIMMONS. The production of even a bird's-eye view of London is, owing to its size, almost an impossibility. Mr. WYLLIE, in passing through the air, was able to see much; and by making careful sketches in detail from various points of vantage in the metropolis he has been enabled to render them into an harmonious whole, and the general effect has evidently been successfully caught by the artist. The extent of London is so vast, and the atmospheric conditions generally so bad, that it is not easy to get a bird's-eye view of London even from a balloon.

ATTENTION has been called to the state of Stirling Castle, with a view to restoring the interesting buildings which are now put to use as barracks and stores. The castle is rich in ancient historical buildings. It has a palace, begun by JAMES V. and finished by MARY, the remains of an older palace dating prior to the reign of JAMES II., a Parliament House built by JAMES III., and a Chapel-Royal founded by JAMES VI. A correspondent writing on the subject says that the palace still retains externally much of its pristine grandeur. Its spacious apartments, however, have been cleared of all their ornamentation. Fortunately a large number of the figures, carved in oak, which used to adorn the apartment known as the King's room, fell into the hands of the Stirling authorities, and are carefully preserved. Others found their way into the possession of various persons of taste throughout the country. Perhaps in the event of a restoration these figures could be collected, and once again allowed to adorn their rightful place. The portion that remains of the earlier palace has been considerably knocked about. This part is of great antiquity, and has been the scene of many historical events. One of the rooms was the scene of JAMES II.'s assassination of the Earl of DOUGLAS. The Parliament House has suffered more damage than any other of the structures by the introduction of partitions and the insertion of two storeys between the floor and roof. The original large and beautifully-arched windows were built up and substituted by others more suited to the altered state.







The Architect, May 24<sup>th</sup> 1884.



SEYMOUR LODGE, DUNDEE.

C. & L. OWER, ARCHITECTS.









"INK-PHOTO," SPRAGUE & CO, LONDON.

## ALMSHOUSES, L

PERCY G. STON



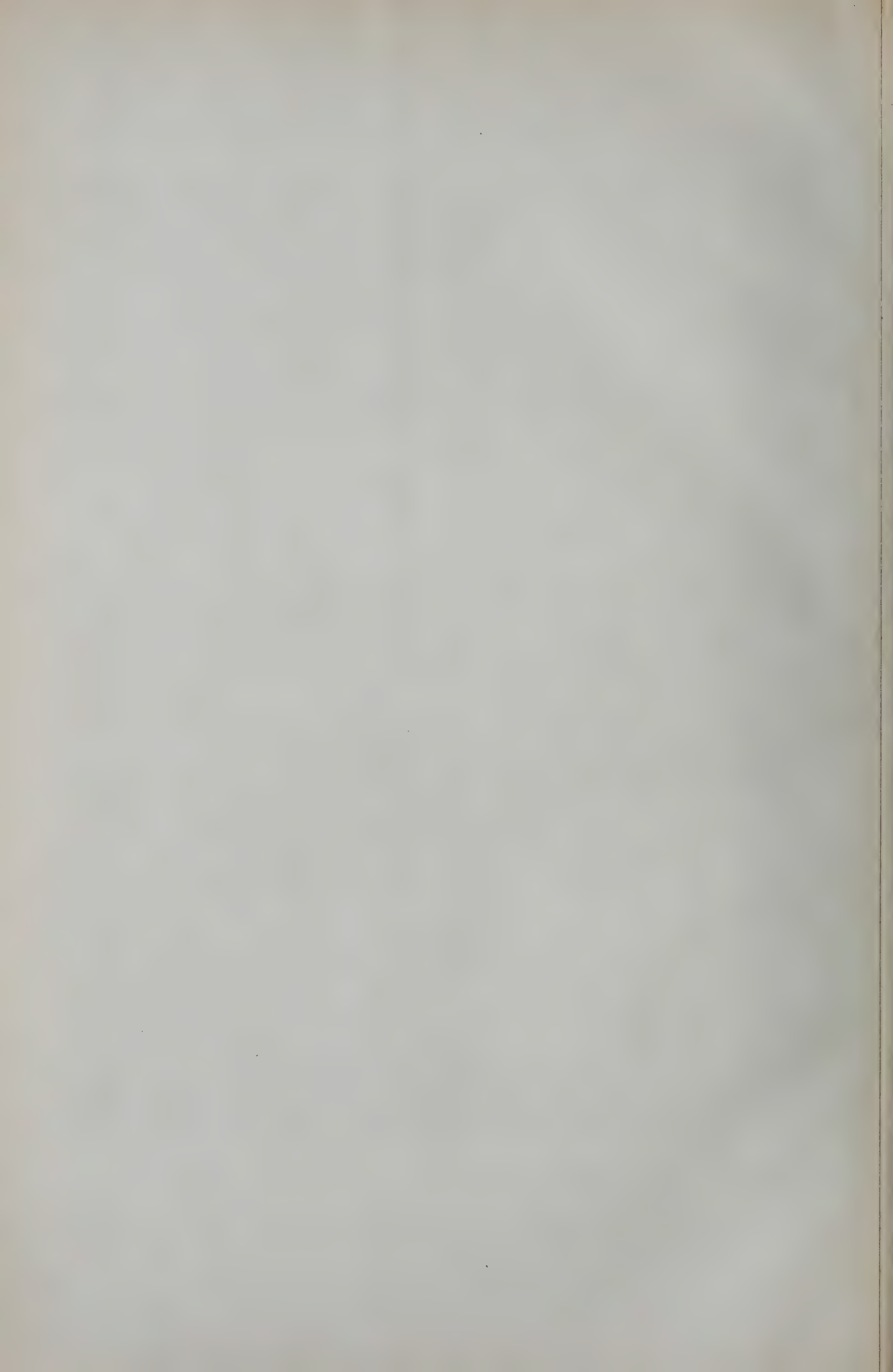
124<sup>th</sup> 1884.



TON, SUFFOLK.

ARCHITECT.

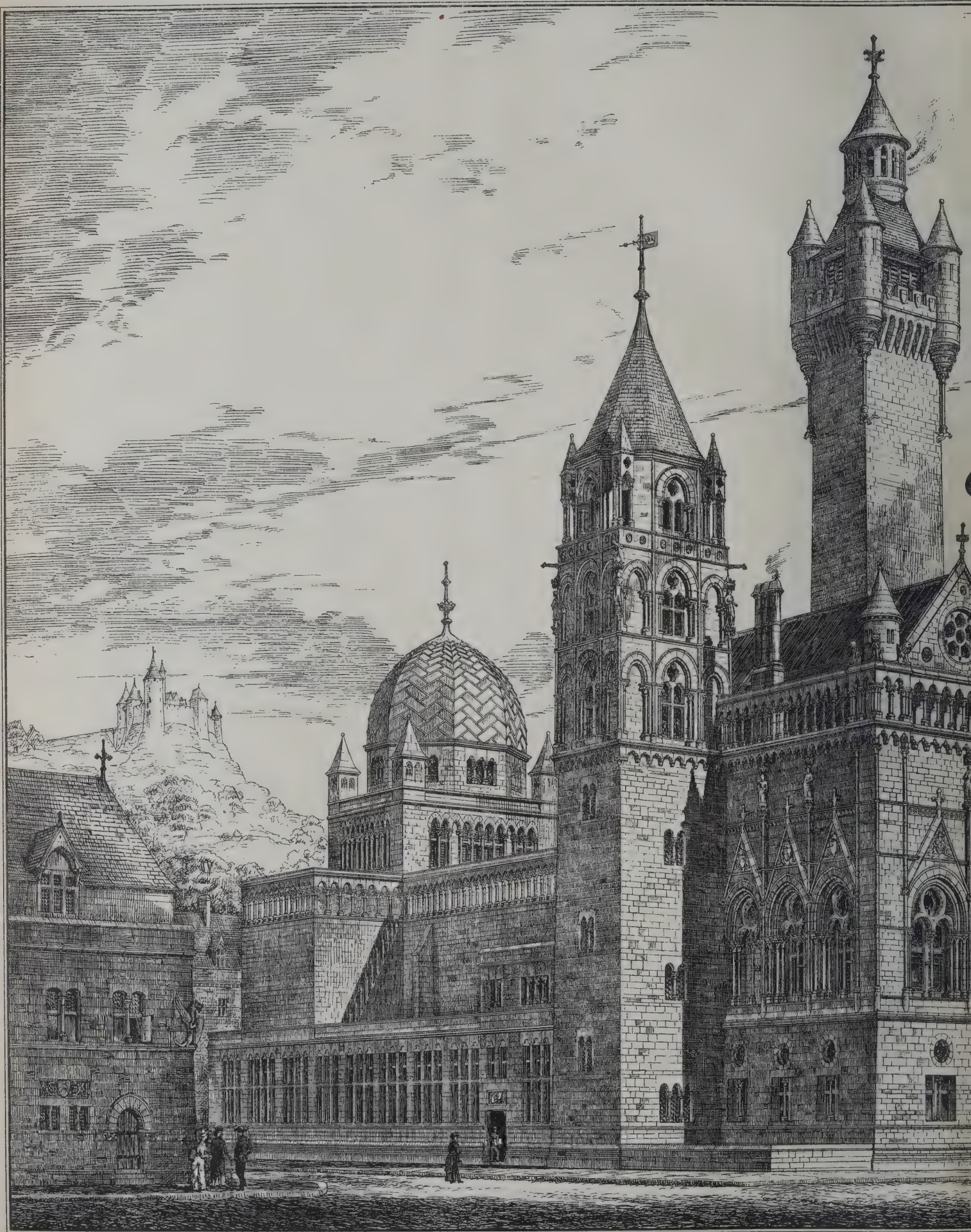










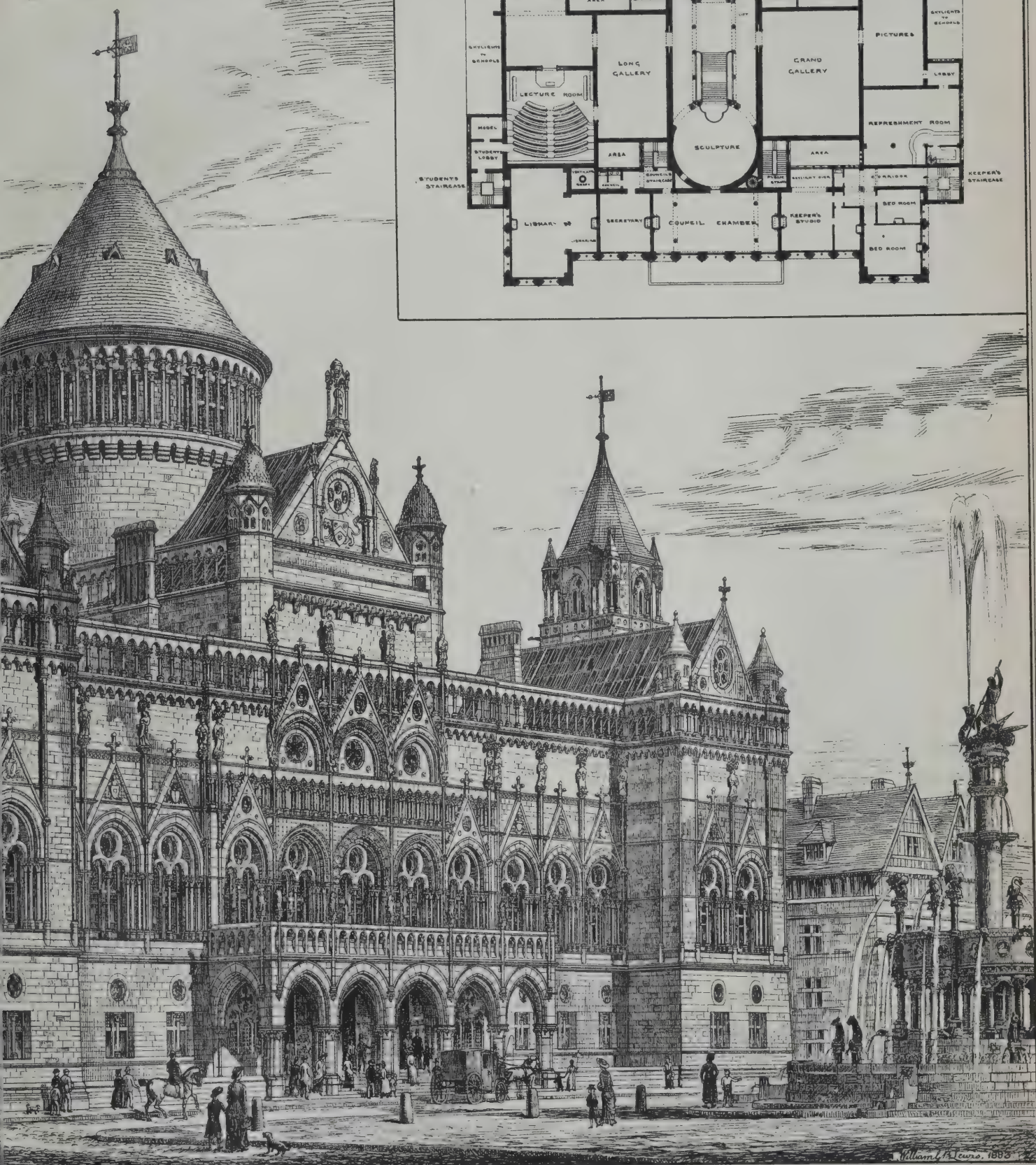


DESIGN FOR A

BY WILLIAM G. B.



g 24<sup>th</sup> 1884.



DEMY OF ARTS.

WIS, ARCHITECT.







The Architect, May 24<sup>th</sup> 1884.



"INK-PHOTO" SPRAGUE & CO, LONDON

UNITED PRESBYTERIAN CHURCH.  
NEWPORT ON TAY.  
C & L. OWER, ARCHITECTS







## ILLUSTRATIONS.

ALMSHOUSES, LEISTON, SUFFOLK.

THESE almshouses are in course of erection for the labourers on Mr. OGILVIE's estate at Leiston, in Suffolk. Each dwelling contains a living-room, kitchen, and scullery, with two bedrooms over, and is designed as cheaply as is consistent with actual comfort. The materials are red bricks made on the estate, with timber construction above, brick nogged and rough cast. PERCY G. STONE.

DESIGN FOR AN ACADEMY OF ARTS.

THIS design—which was one of the few submitted for the medal of the Royal Academy—is by Mr. WILLIAM G. B. LEWIS, Architect.

SEYMOUR LODGE, DUNDEE.

THIS lodge was built for the proprietor, Mr. HENRY MCGRADY, and has been finished within and without in the most careful manner. The principal rooms are finished in oak and other ornamental woods, and all the mantelpieces, sideboard and other recesses, have been handsomely decorated to special designs. Over the sideboard is a window which has been filled with stained glass, representing domestic virtues—the architects' design—and executed in the highest style of the art, by Messrs. BALLANTYNE & SON, of Edinburgh. Cathedral glass has been used in all the lobby and staircase windows, giving a very rich interior effect. Local stone has been used, with Fifeshire freestone corners.

All the works have been carried out by local tradesmen, with the exception of the stained glass and iron railings. The architects are Messrs. C. & L. OWER, of Dundee.

UNITED PRESBYTERIAN CHURCH, NEWPORT-ON-TAY.

THIS church has been lately completed to accommodate 400 persons; and under the church is a hall to seat about 200, with heating chamber, vestry, lavatories, &c. White Fife freestone has been used throughout. Provision has been made for the insertion of a gallery to seat 100, the staircase to which is provided in the tower. Tinted cathedral glass has been used throughout, except in the west circular window, which is stained, which window was a presentation one, as were also the cushions with which the whole church has been furnished. The effect inside is warm and comfortable, and the acoustics are all that could be desired.

The architects are Messrs. C. & L. OWER, of Dundee, whose design was selected in a limited competition, in which Mr. LEIPER, of Glasgow, acted as professional referee.

HOUSE, FONNEREAU ROAD, IPSWICH.

THE alterations and additions just completed to this house, which was illustrated last week, have made it a very convenient town residence. The work has been carefully executed by Mr. E. CATCHPOLE, builder, Ipswich, under the direction of Mr. WM. EADE, architect, Post Office Chambers, Ipswich.

## THE ARCHITECTURAL ASSOCIATION.

THE twelfth ordinary meeting of the Association was held on Friday evening, the 16th inst., Mr. Cole A. Adams, president, in the chair.

Mr. COX announced various donations which had been made to the library, and a vote of thanks was duly awarded to the donors. Several works had also been purchased for the library.

The following gentlemen were elected members:—Messrs. E. W. Lewcock, W. Stirling, W. Alford, P. A. C. Wilkinson, E. J. Cooper, C. J. H. Cooper, C. Earp, and A. B. Walters.

## The Travelling Studentship.

Mr. W. H. ATKIN BERRY, hon. secretary, read the following award which had been made by the judges, Mr. T. E. Collcutt, Mr. C. Henman, jun., and Mr. T. Batterbury, in the competition for the Association Travelling Studentship, and addressed to the hon. secretaries:—"We have the pleasure to inform you that we have awarded the travelling studentship to Mr. S. J. Oakshott, and the prize of 5*l.* to Mr. G. G. Woodward. We specially commend the drawings submitted by Messrs. W. H. Bidlake, G. G. Wallace, and E. H. Selby." There were nine competitors.

## Nominations.

The list of nominations of officers to be elected at the next ordinary meeting, to serve for the session 1884-85, was read. Mr. Cole A. Adams, the retiring president, was nominated for re-election. Mr. C. R. Pink and Mr. H. W. Pratt were nominated as vice-presidents.

Mr. J. A. GOTCH then read a paper on "John Thorpe and the English Renaissance," which appears in another page.

Mr. WYATT PAPWORTH said that twenty years back the subject had interested him very much, and that he had then hoped to do what Mr. Gotch had now done. Mr. Gotch, by his examination of the plans, had to a great extent elucidated the subject of the book. He had thought that John Thorpe was an amateur, and not an architect, judging from the drawings in the work and nothing more; but he thought that Mr. Gotch had shown that Thorpe was an architect. The names of other architects of the same period were not recorded, nor did they seem to have been noticed in the county histories. Stow mentioned the house of Lord Derby as in course of erection, but he did not give the name of the architect. Looking at what might be called the sanitary arrangements, it was curious to find that at Wollaton there was no privy on the ground floor, that at Burleigh there were two on the ground floor, and at Kirby there were nine on the upper floor. In the house built at Wanstead by Wellesley the centre was arranged for his own occupation, and the two wings formed separate and complete dwellings in themselves. Shute died a year after publishing his book, and, except that he called himself a painter and sculptor, nothing was known about him, though there was an inscription on his tombstone setting forth that he designed a large number of buildings, &c. Mr. Papworth said none of the plans shown that night apparently were planned in the familiar form of the letter E. The plans in each case were either on the principle of the French château or the central court.

Mr. R. PHENÉ SPIERS said that when Mr. Gotch pointed out that John Thorpe's drawings were represented partly in perspective and partly in elevation, his thoughts reverted to the time when he joined the Architectural Association in 1856, when the practice in design was partly in elevation and partly in perspective. It would be interesting to know how it happened that Robert Smithson was said to have been the architect of Wollaton Hall. There was a theory as to the authorship of the design of Longleat, that plans for a mansion prepared by John of Padua, but never carried out, had been put into the hands of John Thorpe by the inheritor of the property, an ancestor of the present Marquis of Bath, and that John Thorpe had erected Longleat from them. Smithson was connected with the building of Wollaton Hall, but whether as clerk of works, assistant, or really the designer of that great edifice, was a question. Wherever the architecture was obtained the plans were English. An important feature was noticeable in the prominence given to bow windows or blocks. The three projecting blocks at Cowdray with their windows were quite sufficient to give an architectural character to the house without any other decoration. In France, Italy, &c., we noticed, with the absence of these blocks, a natural craving for some ornament by the use of Orders one above the other, columns, &c. John Thorpe did not seem to notice that the columns were intended to be actual portions of the structure. Throughout Italy, especially in the better structures, it was found that the termination of the wall always had a column. Thorpe applied them to his buildings simply as decoration. He used them to divide the wall into a series of panels or long horizontal lines, &c. The Town Hall at Brescia was perhaps the only building in Italy which was an exception to the general purity of style. The pilasters were slightly within the building, and not at the end of the block.

Mr. J. D. SEDDING remarked that Montacute Hall, said to be the work of John Thorpe, showed the E plan. He said that he could not agree with Mr. Gotch that everything joyful and light-some came in with the Renaissance. His view of it was exactly the opposite. The Renaissance movement was the death of craftsmen, bringing in as it did clever men with their sketch-books, whom the native craftsmen had to follow. He himself was a student of Gothic, and he regarded it as anything but characteristic of a dark age. When one thought of all the imagery the Mediæval buildings were filled with and of the Mediæval workman, with his fancy so unfettered, one was struck with the little of fancy that was to be found in the sculpture of the Renaissance period. As to columns being used regardless of construction, might it not be that John of Padua followed the Venetians, who applied columns in the same way as marble by way of veneering and not of structure?

Mr. SPIERS said that he spoke of Thorpe rather than John of Padua.

Mr. KERSHAW, M.A., Mr. CLARKSON, and Mr. STOKES also made some remarks.

A vote of thanks was then passed to Mr. Gotch for his paper, and that gentleman having replied, the proceedings terminated.

The Building Trades Exhibition at Bingley Hall, Birmingham, closed on Saturday last.



## ARCHITECTURE AND ITS ARCHIVES.

By S. W. KERSHAW, F.S.A.

ARCHITECTURE, like other sciences, has its annalistic history, not only in the stones which fashioned so skilfully into the wondrous buildings of past ages, those cathedrals, churches, and abbeys which are the rich inheritance of our land, but in the more silent, though hardly less expressive agencies which survive in records, fabric rolls, manuscript illuminations, seals, sketches, and in the monkish chronicles of old.

Many are the sources whereby architecture has left its impress on our thoughts, ideas, and associations. As naturally we look first to the author or designer of buildings, so the lives of those master workmen, the "superintendents of buildings," as they were formerly called, first attract our notice. Of those lives, still so dimly known even to us now, and whose work has left its mark in the arcading, the rich vaulting, the cloisters, or the stately towers of our churches, much can be studied and enjoyed. Although records have been silent about many an architect of our great Mediæval shrines, yet history has enabled us to point with much certainty to the more noted of those whose names are famous and authentic. At that time, several of the prominent architects were "clerics" as distinguished from the laity, and the prelate builder, if I may so call him, takes a foremost place in our early annals. At Canterbury were the ever-remembered works of Anselm, Lanfranc, Gundulph, William of Sens, "the English William," Cardinal Morton, Cichele, Prior Goldstone and others; at York we read of Archbishop Walter de Gray and John le Romeyn; at Winchester, William of Wykeham, Bishops Waynflete and Fox; at Exeter, Bishop Grandisson (whose design of the west front, rich in sculptured figures, is widely known); at Wells, Bishops Jocelyn and Beckington; at Ely, Bishops Hugh, Alcock, West, and Alan of Walsingham; at Lincoln, the famous "St. Hugh of Lincoln" and Bishop Grostête; at Hereford, Bishop Cantilupe (whose shrine has become a note-word of beauty); at Worcester, St. Wulfstan; and at Durham, the famous Ralph Flambard. This roll of great names is but a tithe of those whose designs are recorded only in stone, and of whom no written record exists; but the matchless value of their work is their best monument, instructing even to-day by its beauty, consistency, and power.

The ways and means of raising money for church building in early ages was pious and liberal; for miles around, contributions poured in for the work, taxes were levied on certain articles, pilgrimages were made, and indulgences were a frequent source of revenue for the increase and repair of all structures. With St. Paul's of old, indulgences were much in fashion; for the repair of Paul's Cross and other portions of the cathedral we constantly find allusions in archives and MSS.

The fabric rolls and registers of the bishop's See, in each respective diocese, offer abundant and curious information as to the payment of wages, the maintenance and condition of buildings, and other particulars. Thus, in the register book of St. Osmund, Bishop of Sarum, is a plan of Salisbury Cathedral, *circa* 1260-1300. The Register has recently been edited for the Rolls Publication Series by the Rev. W. H. Rich Jones. This, an isolated example of what the student of Mediæval history may find in searching for architectural lore, is but one of a thousand. Another occurs in the Lambeth MS., No. 1,106, and has in the margin a sketch of the west end of old St. Paul's, thus showing how valuable is the connection of architecture with the documents of its time, and that help to the judicious "restorer" may frequently come in welcome guise from almost unexpected sources. The late Professor Willis in his learned remarks on the "Conventual Buildings of Christ Church, Canterbury," found able illustrations thereto in a drawing preserved in the Psalter of Eadwin at Trinity College, Cambridge, a drawing made about 1165, wherein is figured the whole of that Norman priory, so well known by some of its exquisite fragments now remaining in the cathedral precincts.

To multiply instances by the aid of ancient documents would be endless, and but one more occurs to my mind, that of Waltham Abbey, whose restoration by the late W. Burges was much assisted by MS. lore. In the British Museum are two twelfth-century MSS., entitled, "De Inventione Sanctæ Crucis," and in these was the legend of Waltham Abbey and its foundation.

Another form of documentary aid is to be found in the monastic chroniclers, who generally gave full scope to the facts and occurrences which related to their own particular minster, priory, or abbey. The names of several are familiar to most of us, as the Chronicle of Florence of Worcester, Simeon of Durham, Abbot Benedict of Peterborough, and Roger de Hoveden, who gave York Minster his special regard.

In some particular instances we find curious and special knowledge—thus, in the Monk Gervase's account of the burning of Canterbury Cathedral; Ingulphus, the historian of Croyland; Gilbert the Norman, of the foundation of Merton Priory; William of Malmesbury's account of the church of Glastonbury; the annals of Waverley Abbey, and similar chronicled accounts. Minute statements are recorded in these histories, which treat of the materials used in construction—stone, lead, roofing, bronze, and woodwork.

There are also preserved in some of the chapter libraries of our cathedrals the "Red book," or accounts of payments and wages. Several of these were destroyed in the Civil War period, especially at Lichfield. That period also recalls the existence of documents known as Commonwealth or Parliamentary surveys, which frequently describe the condition and site of buildings. Plans and sketches sometimes accompany these surveys, as in the case of St. Paul's, where a plan of the chapter-house and cloisters, made in 1657, is now preserved in the Public Record Office.

Cathedral statutes, some of which have lately been printed, as Chichester, St. Paul's, Salisbury, and Lichfield, often mention church restoration and repair; and would that every capitular body in our land caused such documents to be published, under proper and learned guidance, to the assistance of archæological and artistic research!

Of the various branches of architecture, the Monastic draws much of its inspiration from MS. sources; indeed it may be said that the abbey and its literature grew together, and that the annals of the one were the foundation-stones of the other. Notably, the Cistercian receives much prominence among the religious orders, and the Cottonian MSS., British Museum, give lists of the various abbeys throughout the world. Cistercian architecture, and its varying modification of plan and arrangement, had such an able and learned exponent in the late Edmund Sharpe, that it is needless to do more than mention his name to the student who wishes to master this fascinating form of art.

Here it may be mentioned that to the abbey charters, documents, or records, was often attached the seal of the prior or of the house. These were often treated architecturally, and form, when chronologically studied, a series of instructive stages of Mediæval art.

In the same cloistered seclusion of the chronicler was the illuminator of MSS., and here the illustration of architecture is very abundant. The artist monk, one of superior attainments, was deputed to undertake the drawing and painting of those finer studies which enrich the missal, breviary, or book of "Hours."

In all MSS., from the tenth to the fifteenth centuries, we find indications of architectural skill, from the vigorous but characteristic interlaced outline ornament of the Celtic school (also seen in the crosses and sculptured stones of Great Britain), to the flagreed shrine or canopied figure that bespeaks the exuberance of decorative design.

Churches and their details, exterior and interior, are to be found pictured in every illuminated MS., and where the student will examine the drawings with a certain reservation, much may be learnt. The general treatment of buildings in MSS. is pictorial rather than technical; the date of the MS. does not always fix that of the building, hence anachronisms and technical errors arise. When the architectural drawing is *contemporary* with the MS. itself, it is a most valuable aid, and cannot be too highly prized.

The rare, illuminated MSS. in our National Library supply endless examples; the accessories and ornamental parts of architecture are fully displayed in these books. Church furniture, lecterns, bench ends, altars, pulpits, screens, shrines, niches, panel work and other beautiful adjuncts of the art are found in unwearying succession.

The development of these and other decorative features in MSS. has formed the material for standard works and essays on the subject by the late Owen Jones, Sir Digby Wyatt, Henry Shaw, all of whose treatises are of acknowledged repute.

Another class of what may be included among archives are the rare drawings and sketches of those architects of the sixteenth and later centuries, the pioneers, if one may so speak, of the Renaissance period. In our own country can be named the drawings and designs of John Thorpe (of fame in the Elizabethan houses), of John Shute, John of Padua, Holbein, Sir Thomas Tresham, Inigo Jones, Sir C. Wren, and others. Abroad, those of Bernini, Bramante, Vitruvius, De l'Orme, Palladio, Du Cerceau vie in interest with native talent.

The exhibition about to open at the Burlington Arts Club of drawings of deceased architects possesses great merit, as displaying, chronologically, the works of well-known men who, much before and after the Gothic revival, have influenced the character of our public and private buildings.\* Water-colour, pencil, and pen-and-ink are represented in this collection, and during the conference week some drawings of the late talented artists, Street, Burges, and Viollet-le-Duc, will be on view at Conduit Street.

The private note or sketch-books of architects are gems in their way, and unprepossessing though the outside may be of yonder thin volume, it is of priceless worth, as being the note-book of the great artist-architect, Leonardo da Vinci, to be seen in the Library of the Brera, Milan.

Another example is before me in the albums of Willars de Honecourt, Durer, Stuart, and others. These and like are the very treasures of architectural art, for in them the characteristic genius of the designer is often seen.

\* The chief examples are by Prout, Carter, Girtin, Sandby, R.A., Edridge, Pugin, Cockerell, Ferrey, Street, Burges, Wyatt, Stuart, Nash, Cattermole, &c., &c.



By the preservation of drawings in our public museums, they have in truth become artistic archives, and in this way Sir John Soane's Museum, the college libraries and galleries of Oxford and Cambridge, have become unique and famous for these special examples.

The union of letters with architecture has had a certain influence in moulding the taste of the period. It cannot be denied that the works of Sir Walter Scott have had their bias in developing the love of the old, which that writer so fully put forth, and which, with other circumstances, helped to stimulate the "Gothic revival" of this nineteenth century. Spenser and Shakespeare have both described architecture, and the fascinating imagery thrown over the works of the former may have had much to do with the buildings that arose in the Elizabethan and earlier eras. The revival of learning has always brought its influence on the arts. The decorations at Fontainebleau owe their existence to the Italian taste, which, introduced by Francis I., found its way into many other structures, and notably in the châteaux of the Loire.

We in England experienced the new manner, and in many a portal or enriched pilaster, even though it be in a far-off mansion, are the sculptured carvings and the classic foliage that tell of foreign growth.

Though literature undergoes, as it must, constant changes, the archives which have given the clue to many a hidden difficulty will remain, and thus may "Art and Letters" be described as hand-in-hand.

### JOHN THORPE.\*

THE beginning of the sixteenth century witnessed a series of important events, which, though occurring in widely different spheres of action, may all be traced to one cause, a reawakening of mankind from the intellectual torpor in which it had been cast by the religious system of the Church of Rome. The backbone of that system was authority. To the officers of that Church were confided the only keys that unlocked the mysteries of the universe. They alone were competent to explain the secrets of nature; they alone were able to introduce sinful man into the august presence of the supernatural Powers. In their cloisters were immured the only students. Almost all knowledge, almost all chances of obtaining knowledge, lay with them. Outside their walls was an intellectual desert. Laymen were content with struggling for existence, either as potentates bent on buffeting each other, or as knightly followers of such potentates, with whom they were content to stand or fall, or else as serfs, with whom the struggle for life lost much of its charm. Laymen had neither time nor inclination to exercise their intellects: with them brute force was not only their umpire in all disputes, but actually their boon companion.

Perhaps the most notable exception to this state of things was to be found in Italy, at the very doors of the Pope's own citadel. Italy was not given over to strife, as the rest of Europe seems to have been. Here men still retained some love of culture, and were content to match their wits against other men's swords. When, therefore, from innumerable causes all working in the same direction, men began to awake from the lethargy of the dark ages, Italy was a fruitful soil, in which the new seed rapidly brought forth an abundant harvest.

This reawakening of mankind, this new birth, has very happily been termed the Renaissance; but it would be a mistake to suppose that the term is applicable only to architecture, or even the arts. The Renaissance in art is only one phase of the great upheaval which affected the whole world—religious, literary, artistic, and political. In religion we call the same movement the Reformation. In English politics it found expression after a time in the great rebellion. In literature one result was Rabelais, with his brutal scorn of bigotry and priestly pretensions; another was our own Shakespeare, the very embodiment of all that is purely and delightfully human.

England's part in this movement was directed to rendering assistance rather than taking the initiative. Both our Reformation and our Renaissance were imported, as printing was. With the Reformation, however, we need not trouble ourselves further. The Renaissance is more than enough to occupy our attention.

It has been observed how excellent a soil Italy offered for the fructification of the new seed. The harvest that ensued can only be fully appreciated by those who have visited the country. Out of her fulness she could well spare something to her neighbours, and we are not surprised to find Italian artists visiting and permanently residing in foreign lands. France, being nearer the source, was influenced first. England, however, was not long in catching the Italian fever. It affected everything—modes of thought, modes of speech, writing, eating, dress, manners, building, gardening. Italy was the bourne whither all young men went on their travels, and they returned saturated with Italian ideas, which, when they came to express them in an English atmosphere, underwent a

curious change. Roger Ascham, in his "Scholemaster," first published in 1570, laments this "Italianating" of English youth.

If Scylla drown him not [he says of the young man who has gone to Italy], Carybdis may fortune swallow him. Some Circes shall make him, of a plain English man, a right Italian. And at length to hell, or to some hellish place, is he likelier to go: from whence is hard returning, although one Ulysses, and that by Pallas aid, and good council of Tiresias once escaped that horrible Den of deadly darkness.

And further on he says:—

If some yet do not well understand what is an Englishman Italianated, I will plainly tell him. He, that by living, and traveling in Italy, bringeth home into England out of Italy, the Religion, the learning, the policy, the experience, the manners of Italy.

And yet, in spite of Ascham's denunciations, he, in common with all of his age, was deeply infected with a spirit which, if not Italian, came to us primarily from Italy—I mean the classical spirit which pervades the whole literature of that time. In another book of his, "Toxophilus," he says plainly that it would have been easier for him to have written it in Latin or Greek, and takes some credit to himself for having written, as he says, "this English matter in the English tongue, for English people." His great desire, moreover, was to see English poetry written in hexameters instead of in rhymed lines. This experiment has been tried more than once, but success is impossible. The hexameter is not suited to the English tongue, and the fact of Ascham advocating it so strongly shows how thoroughly he was carried away by the tide of classical learning which overflowed all Europe.

I dwell at some length on the literature of that time, because it seems to me to be very comparable to the contemporary architecture. There is, however, this great difference—that, although both of them abounded with classic forms, literature gradually freed itself from them, and became purely English, while architecture succumbed, and became less and less English with every succeeding decade. Perhaps the most characteristic book of that time is the "Euphues" of Lyly, and a very dull book it seems to be. However, it abounds with classical allusions. Everything is measured with a classical rule. You are pelted with the ancients, their customs, their superstitions, their excellencies from one end of the book to the other. You cannot read a page without coming across them, their gods, their philosophers, or their poets. And the same sort of thing is found in the architecture of the time—Latin inscriptions, Latin epitaphs, statues of the twelve worthies, busts of Roman poets, Greek philosophers, heathen gods, nymphs, and satyrs. And yet, with all this, the books are English, and so are the buildings. Wollaton Hall is no more like the Château de Chambord than Shakespeare's Falstaff is like Rabelais's Panurge.

It took about two generations to invest English architecture thoroughly with the classic spirit. But by the time that wealthy Englishmen had made up their minds that they liked the Italian details, John Thorpe appeared upon the scene. He came at a very fortunate juncture for an architect. The times were settled. The old disputes which had convulsed England from the Tweed to the Exe were disposed of. The country gentlemen, whose houses had been their castles, found the old fortress arrangements ill-suited to the growing elegance and luxury of the age. They wanted new houses. The revenues of the dissolved monasteries furnished them with ample means. House-building became the rage. The fever seized on the whole nation from the Lord Treasurer to "Mr. Johnson ye druggist," both of whom were clients of John Thorpe.

Some people are inclined to doubt whether Thorpe really was an architect, and to hold that he was merely an amateur who made sketches of existing work or of the large houses that were then being built; and it is not easy, from his book alone, to prove that they are wrong, for among the drawings is a plan of Henry the Seventh's Chapel at Westminster, which, from anything it says, and did we not know otherwise, we might almost conclude to be as much his design as the others. However, I hope to satisfy you from more than one source that Thorpe was actually an architect.

Before proceeding to argue about the book, however, it may be as well to describe it.

It is a volume of folio size, some 17 inches by 12 inches, consisting of sheets of thickish, rough drawing paper, with a particular watermark. The pages are used both back and front, as though it had been bound before being used; but yet this clearly cannot have been the case, since some of the drawings go right down into the fold of the book, and have evidently been bound up after completion. In one case, however, a plan which covers two pages is stopped short of the crease or fold by a straight line, and continued on the opposite page from a similar line, thus avoiding the burying of any part in the fold. The drawings, generally speaking, are in ink over pencil-lines, and in many cases the pencil-lines have not been rubbed out. Some few are in pencil only, but these generally are slight and rough. There are many more plans than elevations, and there is only one section. There are a few pages of full-size mouldings, one of the Five Orders, carefully drawn with proportional lines; one or two of sketches for ornament, and one with elaborate instructions how to put a building into perspective, instructions which seem generally to have been neglected by

\* A paper read by Mr. J. A. Gotch at the meeting of the Architectural Association on May 16.



Thorpe, for his perspectives are far from correct. The drawings seem to have been ruled in with a common pen, and probably with a rolling ruler. Some of the plans are very neatly done, most of them are tolerable, some are bad. The elevations, or "uprights," as he calls them, are generally indifferent: they combine the geometrical and the perspective treatment, not altogether with success. If these are the best drawings turned out from the leading office of the time, we may congratulate ourselves upon the advance made in architectural draughtsmanship since the Renaissance.

There are 282 pages in the book, some score of which perhaps are blank. More often than not there is one drawing to a page—perhaps the ground plan on one page, and the upper plan on its opposite. But many of the designs have nothing but a ground plan; so whatever the book is, whether a note-book or a collection of original designs, it is not a complete account of the buildings shown.

There are about one hundred and forty different buildings illustrated, of which some fifty occupy two or more pages; only fifty-five of the one hundred and forty are either identified or have a title put on them by Thorpe. There remain therefore some eighty-five of which we know absolutely nothing except that they appear in this book. If we could identify these eighty-five we might perhaps get to know something more about the architect himself. Of this large number a few are clearly only freaks of design, and were never intended to be executed. The bulk, however, appear to be *bonâ fide* designs, intended to be carried out. I have roughly classified them thus:—

Fifteen are sketches not likely to throw any light on the subject.

Twenty are unfinished drawings, and may either be designs begun but abandoned, or designs in the midst of being worked out. Some may be identifiable, perhaps, but many of them are hopeless.

There remain forty-seven, of which nine are of half-timber; all the rest except three (viz. thirty-five) are finished designs of large houses, some of them of very great extent; and I have no doubt that did we possess plans of the principal Elizabethan houses still existing, we could track many of them home to John Thorpe's book. Doubtless not a few of the houses there shown have been destroyed, but some of them certainly ought to be identified, and if anyone possessed any plans likely to be of use, I should be very glad if they would allow me to compare them with Thorpe's, or else do so themselves, and acquaint me with the result.

Having learnt something of the book, the question arises, What do we know about the man? And the answer is, Almost nothing. Who was John Thorpe? Where was he born? Where did he die? How long did he live? To these questions we can give no answer.

From three sources only do we know anything about him: from his book; from a plan made by him and preserved in the Record Office among the State Papers; and from a payment to him recorded in the "Issues of the Exchequer."

The plan is labelled "Eltham, 1590," and is a ground-plan of the royal palace there. It has no special title on it to indicate for what purpose it was made; but, judging from its being among the State records, and from the description of some of the rooms—"decayed lodgings" and "the store-house for the works"—it seems to be a plan of the premises made for the purpose of enlarging or repairing them. In the middle of the plan is written, in the handwriting rendered familiar by frequent examinations of his book, "exc. p. Jo. Thorpe"—which fixes its author beyond a doubt.

The other reference to Thorpe occurs, as stated above, in the "Issues of the Exchequer" in the reign of James I., and it is as follows:—

John Thorpe } 4th of June 1606.—More to him for his charges in taking the survey of the house and lands by plots at Holdenby, with the several rates and values of both particularly, with his own pains, and three others a long time employed in drawing down and writing fair the plots of that and of Ampthill howse, and the Earl of Salisbury's, by commandment of the Lord Treasurer of England, dated the last of May 1606. 70*l.* 8*s.* 8*d.*

A plan of Ampthill occurs in Thorpe's book, but none of Holdenby or the Earl of Salisbury's, so far as the plans are identified. We may, however, safely conclude that the above payment was made to the John Thorpe whom we already know, and that he was, in the words of Robert Smythson's epitaph, "Architector and Surveyor."

Examining the various plans in the book by the light thus obtained, it is not difficult to believe that the bulk of them are designs in course of being worked out. Some of them are still half in pencil; not infrequently the upper plan does not correspond exactly with the ground plan, but includes fresh features, often adopted in the actual building, as at Kirby. There certainly are often puzzling notes, as for instance, "kitchen, cellar under"; or "hall, great chamber over"; or "gallery above, all this length"; as though referring to something actually built. But in one case such a note (referring to the floor over) is on the ground plan, when the upper plan is by its side, and these notes are just as likely to be memoranda made in designing, as they are to be items of information about completed work.

Some of the plans actually state that Thorpe was engaged upon the buildings. For instance: "Sir Walter Coap at Kensington, pfected p. me J. T." "Queene Mother's howse, fabor St Jarmin alla Paree, altrd p. Jo. Thorpe," or, "Ampthill enlarged p. Jo. Thorpe." Again, on one elevation beneath three types of windows is written "which of these three is best." All of which tends to show that Thorpe was actually a practising architect, and that here we have his work in the process of design.

Take Wollaton, again. Thorpe gives a plan and half a perspective or elevation, and neither of these agree with the building as executed, nor could the discrepancies either have arisen since drawing alterations, or be the result of careless measuring and drawing, for there is a basement in execution which Thorpe does not show, and the ornamental features are not carried out quite as he has drawn them. Among other things the pedestals of the pilasters have each of them a gondola or mooring ring worked in stone, a useless feature, imported bodily and barefaced from Italy. Curiously enough, on his drawing, Thorpe has two treatments of these pedestals, as though for choice—one is a raised panel, the other a gondola ring. Only on one supposition can these things be satisfactorily accounted for, and that is that in this book we have his preliminary sketch.

Some of the notes on the drawings are rather curious, and would lead to sad confusion in the present day if put on a working-drawing and sent to the builder, for instance:—"Hall too long by 5 fo." "This front is drawn 10 fo. to narrow, not long ynough." "This cort should be 88 fo. square" (when it scales 70 feet), or finally, "This parlor should have been wyder if the paper had suffered it." So that the only solution that really meets the case is the one just mentioned, that in this book we see Thorpe's brain at work.

That these are the working-drawings from which the houses were actually built I do not believe. Several of the plans I have compared with the actual buildings; in all cases there are discrepancies more or less considerable between them. The main idea in each case has been carried out. Even the main walls are built as drawn, but the internal arrangements frequently differ very much, and in essential features; that is to say, the differences cannot have arisen entirely from subsequent alterations. In proof of this I would cite Burleigh House (fol. 57, 58), Kirby Hall (fol. 137, 138, 139, 140), Slaugham Place (fol. 239, 240), and Lyveden New Building (fol. 215, 216). Then, as already observed, there are many more ground plans than upper plans; there are only some thirty elevations out of about 200 drawings, and only one section in the whole book.

Another very important feature is this—that some of the drawings are copied from a French book on architecture, by Jacques Androuet du Cerceau, published in 1576. The two books (Androuet's and Thorpe's) being in different museums, it is impossible to collate them; but, speaking from memory fresh from the subject, three of Androuet du Cerceau's drawings will be found copied in Thorpe's book—viz., the theatre at St. Germain's, plan and elevation; the plan of the Château de Madrid, Paris; and the plan of the Château Anssi le Franc. They have quite a distinct appearance, and differ from the bulk of Thorpe's drawings; but a close examination of the two books will go far to show that the Englishman was largely infected with the Frenchman's love of quaint planning. In fact, the quaintest of Thorpe's plans have a French origin.

Having thus come to a conclusion respecting the character of the book itself, let us look a little further at its author, and then at the general character of his work.

In the first place, then, his book covers a large number of years. The earliest date written in it is 1570, in a note on the ground-plan of Kirby, "whereof I layd ye first stone A<sup>o</sup>. 1570." This agrees with the date of 1572 actually on the parapet. The latest date is 1621, on the plan of the Queen Mother's howse, "altrd p. me Jo. Thorpe." The period thus covered is fifty-one years, and is practically coincident with the beginning and end of what we call the Elizabethan and Jacobean styles. There are a few intermediate dates, as 1596, 1600—in which year he was in Paris, as he has plans of "Mounseer Jammet his howse in Paris" and of "St. Jermin's House, V leagues from Paris." The only other date is 1606, on a house for Sir William Haseridge. But apart from these dates, which are actually written with his own hand, we can date many of his buildings from other sources, and thereby obtain a tolerably close sequence, commencing with 1560 and ending in 1621.

Several of the drawings, however, especially the earlier ones, are evidently taken from buildings already erected, and the first identified house which we can suppose to have been designed by him seems to be Copt Hall, in Essex, the date of which is given as 1564 to 1567.

The whole book is devoted to houses; the only exception is Henry the Seventh's chapel, and the commencement of what looks like the east end of a church or cathedral. Among the designs are included many of the very largest and stateliest structures of that age, as the following list will show:—Theobalds, for Lord Burleigh; Buckhurst House, Sussex, for the Earl of Dorset; Loseley, near Guildford, Sir George More's; Knowle, near Sevenoaks, for Lord Buckhurst; Kirby Hall, Northamptonshire, for Sir



Humfrey Stafford; Burleigh juxta Stamford, for Lord Burleigh; Wollaton, near Nottingham, for Sir Francis Willoughby; Longford Castle, Wiltshire, for Sir Thomas Gorges; Lyveden New Building, for Sir Thomas Tresham; Audley End, Essex, for the Earl of Suffolk; Holland House (enlargement), for Sir Walter Coop; Aston Hall, Birmingham, for Sir Thomas Holt; Somer Hill, near Tunbridge Wells, for Lord Clanrickard; Slaugham Place, Sussex, for Sir Walter Covert; Danvers House, Chelsea, for Sir John Danvers. If we could identify others of the plans we should be able to extend this list.

We have made Thorpe out, therefore, to be an active architect, with a magnificent connection, embracing many of the leading men of the time. "An interesting question would be—How did he get it? But to this we can give no answer but surmise. He may have been sent to Italy by one of his patrons, as John Shute was by the Earl of Northumberland, there to pick up a knowledge of Italian work, and to acquire, as he says, "the tricks and devises as well of sculpture and painting as also of architecture." At any rate, Thorpe seems to have succeeded better as an architect than did Shute, who is only known by his book on the "Chief Groundes of Architecture."

Or he may have studied in France. There is no doubt that he closely studied Androuet du Cerceau. Not only did he copy some of his plans, but he took them all very much to heart, and not improbably borrowed the idea of four corner pavilions from him. There are several of Androuet's plans with these features; but the earliest of Thorpe's in which they are really developed is Wollaton Hall (1580-1588), Androuet's book having been published in 1576. It would seem also that Thorpe was much struck with some of the fantastic designs in the French book. There is one of a hexagonal building, having a projecting arm on each alternate face; another forming a cross, with a large pavilion at the end of each arm; another hexagonal on plan; and another circular. In Thorpe's book we get a few very similar schemes, but only two are known to have been carried out—viz., Longford Castle and Lyveden New Building—and of these the former is said to have been taken from a Swedish castle.

But though Thorpe was evidently much affected by Androuet du Cerceau, he did not blindly copy him either in his plans or his elevations. The English plans differ in many respects from the French; and though the general idea may in some cases have been borrowed, the working out is always on English lines.

There are, roughly speaking, six types of plan to be found in the book:—1. One or more courtyards, as at Burleigh. 2. A range of buildings with a wing projecting at each end at right angles. 3. A long range with few or no projections. 4. A central block with a pavilion at each corner (the French type). 5. A small compact plan. 6. Quaint designs, made to look well on paper rather than to be useful.

In almost every case, the principal feature is the hall, and in almost every case the entrance is at the end of one of the long sides of the hall, and is divided from it by a screen, the plan universally adopted in that age. There are a few exceptions to this rule, in which the hall is entered otherwise than through the screen, but they are not many. The vestibule formed by this screen gives access on the other side to the buttery and servants' apartments. There is, however, very little scientific planning, and economy is not studied in the least. The only points attended to are these:—One side of the house is occupied by the family, the other by the servants, the common meeting ground being the hall. Generally, near to the latter is the kitchen, and adjoining the kitchen we always find the dry and wet larder, the pastry, and the surveying place or serving place. Upstairs is the gallery, almost invariably made as long as the building will possibly allow. When this is said, everything that can be has been said for the care bestowed on the planning of most of the houses. The staircases are always fine features, and are frequently lavishly supplied. But having once arranged the great eating chamber and its dependencies, and the gallery, Thorpe gave himself little trouble about the rest of his rooms; the parlours and bedrooms came—like the colour of the hair of Benedict's ideal sweetheart—as it pleased God. They were all thoroughfare rooms, and many of them opened into the courtyard. They seem to have been allotted in a haphazard fashion, according to the space at command, and the space at command was frequently regulated by some fantastic notion about the plan.

The consequence of this is that as men's notions of comfort advanced, they either had to put up with much inconvenience, or else had to add corridors, or else simply pulled their Elizabethan houses down and built anew. Apethorpe Hall, which is built round two quadrangles, is, according to the testimony of the inmates, a most inconvenient house, though charmingly picturesque. Burleigh has had a corridor put round the court; Wollaton, being more compact, is much more comfortable, but it requires a very large staff of servants.

In fact, Elizabethan houses were meant for a large staff of servants; they were built for display. In those days of royal progresses enormous crowds of gentlemen and their retainers had to be housed at once. This entailed a large hall for dining, extensive arrangements for cooking, a long gallery for receptions, and a multitude of bedrooms, or "lodgings," as they are called.

Bacon, in his Essays, published in 1598, *i.e.*, about the middle of Thorpe's career, gives us his ideas on the building of large houses. He requires a side of the palace devoted to the banquet or feasts and triumphs, and the other to the household or for dwelling. These are to be "uniform without, though severally partitioned within." Then there is to be a great and stately central tower, with "goodly leads upon the top, railed with statues interposed." The stairs are to "be upon a fair and open newel, and finely railed in with images of wood cast into a brass colour, and a very fair landing-place at the top." "Embowed windows" are strongly recommended, especially in the country; "but let them be but few, four in the court, on the sides only." The court itself is not to be paved, "for that striketh up a great heat in summer, and much cold in winter; but only some side alleys with a cross, and the quarters to graze, being kept shorn, but not too near shorn." In each corner of the court is to be a staircase cast into a turret. Beyond this court is to be another, cloistered all round, and containing private bedrooms and galleries—"whereof you must foresee that one of them be for an infirmary, if the prince or any special person should be sick, with chambers, bed-chamber, antecamera, and recamera joining to it." There are to be three other courts in the front of the house, the first green, the second likewise green with an embellished wall, the third cloistered on the inside with pillars. "As for the offices, let them stand at distance, with some low galleries to pass from them to the palace itself." A great deal is also said about minor matters, about cupolas, and fountains, "and all other elegance that may be thought on," but the gist of Bacon's instructions is contained in the foregoing extracts. How far, it may be asked, do Thorpe's plans embody these ideas, expressed by a contemporary pen? His larger houses carry them out more or less completely, though none of them exactly answer to Bacon's description. Audley End comes perhaps as near as any: we have there the two main courts, one in the midst of the house itself, with a staircase in each corner, the other cloistered and with lodgings round it. The offices, too, are apart, but connected with the main building by a low gallery; and, as for the cupolas and other "elegancies," Evelyn, who saw it in its prime (1654), declares it "shows without like a diadem, by the decoration of the cupolas and other ornaments on the pavilions." But though no one plan contains all that Bacon would desire, they all fulfil more or less his requirements: the staircases on fair and open newels, the leads railed with statues at intervals, the fair grass courts, the cloistered walks, and the embowed windows.

The "partitioning within" of the various wings is also in accordance with Bacon's ideas. On one of Thorpe's plans is a suite of rooms called a "nobleman's lodging." It comprises "his antecamera," "servant's lodging," and a room for "wood, cole, and privy." Every house, large or small, to which there is any writing shows a kitchen, dry and wet larder, and buttery. Most of them have bakehouse and pastry, surveying place, and pantry. A few have a bolting-house, a scullery, a pantler's lodging, a butler's lodging, a small room labelled "pewter," a "boyling house," and a "spicery." One has a day-room for servants, another a "hall for hynds" another a "wayters' chamber." These are the chief servants' apartments. For the family we have the hall, summer and winter parlours, and the gallery, sometimes replaced by a "great chamber." We find also a "dyning parlour," with drawing chamber; breakfast-room, "studdy," library, and chapel; in one case a room for a "chaplen," with "his study" next it; also a steward's lodging, and, adjoining, "his clerk." There is, beside these, a title which I venture to say is never put on a modern plan, however suitable it might be. When Thorpe, in the exigencies of his quaint planning, found he had a space for which he could find no use, he boldly labelled it "waste," and left it.

This list of apartments, though not exhaustive enough for the present day, nevertheless shows a great advance in domestic comfort from Mediæval times. There was, however, as yet no scientific planning, and only a rudimentary knowledge of aspect, as the following extract from John Shute will show:—

Your principall chambers of rest and libraries and such other like must receyve their lightes from the East, for that the sonne by natural heat at his rising draweth to him all corrupte humours and evil vapours of the earth, and quickneth the spirittes of man and beast, and if ye will cast therein baynes or hot-houses, with winter chambers and parlors they shal receive light from the west. For that side is defendid from the south windes which are grevous and contagious. . . . Your study places were you would write draw or devise, or the places wher your sellers should be cast, ought to receive their light from the Northe, by cause in that parte are the lights which are stedfast.

The selection of the north for the apartments named is judicious enough; but the dislike shown to the south is not justified, and the peculiar properties attributed to that quarter and the east are of a piece with the medical knowledge of the times, which was not a little mixed with astrological fancies.

But quitting the subject of plans, let us consider for a moment the architectural treatment of the buildings of that age. Thorpe's designs, so far as they survive, do not exhibit any striking peculiarities which mark them off from all others. He worked chiefly in stone, at any rate so far as the moulded features are concerned. If he had a special mark by which his work may be distinguished,



I should be inclined to say it is in the frequent introduction of heraldic shields; but possibly a further comparison of his work with his contemporaries' might modify this view. His details are no better and no worse than others of the same age. It would be rash to say that he continually improved as he grew older, for Kirby, Audley End, and Slaugham, exhibit no marked differences in refinement. By far the purest work of his, or any buildings of the time with which I am acquainted, is to be found at Lyveden in the exterior cornices. It is an interesting question, which may some day perhaps be answered, as to where the Italian details actually came from, whether from sketch books, or published sources, or full size templates sent over. There are very few of the latter, to judge by the curious distortions which many of the various features underwent. Yet surely these distortions lend a piquancy and individuality which are wholly lacking in the tame correctness of a later age? It is not difficult to trace home to Italy itself the cloistered walks, the entablature, and the entrances; something very like them may be seen in almost any Italian town. But the chimneys, the gables, the windows (especially the bays) are surely of native growth? This, at least, all must admit—that there is something essentially English about our Renaissance, especially about that period in which Thorpe worked. Kirby and Burleigh may not have the purity of detail which marks the Banqueting Hall in Whitehall, but they smack much more of the soil.

Time will not permit us to enter the buildings and examine the interior features, and I should be departing from my text were I to ask you to do so, for Thorpe has no interior details at all, except the full size of a handrail; but before I close I must just draw your attention more particularly to one or two of the houses to be found in his book. And first to Audley End. This is an excellent example of the magnificent scale on which the nobility used to erect their mansions in those days of building. The house as it stands now is very large, but it only covers about a quarter (or even less) of the original area. The kitchen was 52 feet by 37 feet, and the parlour 57 feet by 27 feet. There seem to have been no remarkable features about the exterior save the parapet, which, according to Evelyn, consisted of stone letters, forming an inscription such as exists at Castle Ashby and Temple Newsham. This enormous pile was erected by an Earl of Suffolk who was grandson to Sir Thomas Audley, Lord Chief Justice (I believe) to Henry VIII., and who seems to have amassed a large fortune out of the lands of the dissolved monasteries. It was indeed the old monks' revenues which went to build many of the stately homes of England. Thorpe's connection seems to have been largely among office bearers. Lord Burleigh, Sir John Danvers, Sir Thomas Lake, Sir Percival Hart, and Sir Thomas Heneage all largely depended on the Court for their subsistence. Others of his clients were quite independent of office—for instance, Sir Francis Willoughby, the builder of Wollaton, which, as a composition, may be considered perhaps as Thorpe's masterpiece. The pavilions at the corners, gradually increasing in richness as they ascend, the long parapet connecting them, and the grand mass of the central hall go to form a group which it is difficult to rival. The details are very characteristic: the cornices are somewhat coarse, the pilasters are duly proportioned, and have their bases ornamented with the gondola ring; while in the various niches are busts of Roman emperors, of Vergilius, Aristoteles, Plato, Diana, Mercury, and the other ancients to whom contemporary writers were always referring their readers. Over the entrance is a curious Latin inscription, which I have never yet seen copied correctly. This is the more remarkable, since any mistake destroys its individuality, for it is in reality written in two hexameter lines:—

En has Francisci Willyghbi Militis ædes  
Rara arte extructas Willyghbæisq. relictas.

To which is added the date of beginning and ending:—

Incohatae 1580 et finitæ 1588.

Of Burleigh it is needless now to speak, as also of Kirby, rushing to a melancholy decay—a decay as complete as that which has overtaken Slaugham Place. But one client of Thorpe's, in whom all the world takes interest, and for whom he designed a tiny house to be built in St. James's, was Sir Walter Rawley. There is also a house labelled "Leather End of Holborn," which would locate Thorpe's offices in or near London, possibly in the City. In his plan of Henry VII.'s Chapel we probably see the source whence he adopted some of his peculiar bay windows, and very possibly the fan tracery of that structure supplied the idea for some of the plaster ceilings of the Renaissance.

Among the names occurring as owners of some of the houses are the following, whom I have hitherto been unable to identify, but perhaps this paper may be the means of eliciting information:—Sir Wm. Ruffden, Mr. Johnson, the druggist; Sir Thos. Dorrell, of Lincolnshire; Sir John Bagnall, Sir George S<sup>r</sup> Poole, Mr. Keyes, Mr. Denman, Sir Wm. Haseridge, Mr. Panton, Sir Hen. Nevile, Mr. Taylor of Potter's Bar; Mr. Wm. Powell, and Mr. Ate.

It is time, however, to draw to an end; though not because the subject is exhausted, for I fear I have done little more than touch

its skirts. John Thorpe's book is a large meal to digest; how much more, therefore, the English Renaissance? For my part, I do not care to extol the merits of one style more than another; nor do I see why, because we prefer one particular period, we need therefore go about to deny any excellence to every other. The Renaissance undoubtedly has suffered unmerited obloquy from the early school of Gothic revivalists; but if we reflect a little we cannot fail to see that as the outcome of an intensely interesting age, it demands both attention and respect.

Listening across the centuries to the clamour of the Dark Ages, what do we hear? The din of strife and the ring of hard blows on iron armour. Sometimes above the roar swells the solemn voice of the priest, and once or twice through the lulls we catch the bitter cry of the down-trodden serf. Amid the dust of battle and the flashing of fierce weapons no softening influence, no art is visible, save architecture; and we stand almost bewildered that people so rough and uncultured could have left behind them such faultless art—the one link which binds our sympathies with theirs. But with the Renaissance all was changed. Art triumphed over brute force. The clouds of war began to lift, and with song and laugh mankind emerged from the darkness and took the first step on the path which has never ceased to lead onward to the freedom and comfort which we now possess. We may not neglect an epoch such as that. We cannot live unmoved by the joy which lit the world when Spenser sang and Shakespeare played, when Burleigh counselled and Drake fought, when

The grave Lord Keeper led the brawls,

and when John Thorpe went from place to place, and, amid broad pastures and rustling trees, built into his stately walls not a little of the brightness, the splendour, and the airy fancies of that brilliant age.

## BOWLING CEMETERY COMPETITION.

IN December last the Bradford Town Council decided to offer prizes for competitive designs for the laying-out of the proposed cemetery for the Bowling district. The area intended for the proposed cemetery will be fifty-six acres, and although the Corporation required the competitive designs to include the whole of this area, they do not intend to carry out the whole design at once, but to leave about one-half of the site unappropriated. Competitors were required to set apart portions of the ground for the Church of England, Dissenters, and Roman Catholics. Chapels for each of the above sections to be provided at an estimated cost of 1,500*l.* each for the Church and Dissenters, and of 800*l.* for the Roman Catholics. Registrar's, gardener's, and sexton's lodges, were also to be included in the design, at a cost for the whole not exceeding 1,800*l.*

At a quarterly meeting of the Town Council just held, the following award was approved of. The design marked "Salus Populi" for laying-out the grounds, "Home" for the erection of the buildings; "Fiat Justitia" as second in order of merit, and "Red Cross" as third in order of merit. On opening the sealed envelopes the authors of these designs were found to be: Of "Salus Populi," Messrs. George Heaton, Wigan, and Mr. W. H. Ralph, Chester; "Home," Mr. W. J. Morley, architect, Bradford; "Fiat Justitia," Messrs. George Hepworth & Samuel Wilkinson, architects and surveyors, Brighouse; and "Red Cross," Messrs. Hepworth & Wilkinson, and Messrs. Smith & Woodhouse, Manchester. There were twenty-four competitors in all.

## REVIEWS.

**GASWORKS: THEIR ARRANGEMENT, CONSTRUCTION, PLANT, AND MACHINERY.** By FREDERICK COLYER, M.Inst.C.E., M.Inst.M.E. (E. & F. N. Spon.)

Within the last few weeks a portrait of William Murdoch has been presented to the Birmingham Picture Gallery. It is not improbable that to a great many visitors the name will not excite the least interest. Yet Murdoch was one of those men who were more liberal benefactors to the town than the donors of large sums of money. When in the year 1798 he lighted the workshops of Bolton & Watt he may be said to have created the industries connected with gas illumination, and they have done much to establish Birmingham in its present position and bring it wealth. Other men followed Murdoch in utilising coal gas; but he deserves the credit which Watt has in connection with the steam-engine—that of being the first to bring within the range of business a phenomenon which hitherto had been interesting only to laboratory students. What Murdoch's invention means to the world can with difficulty be inferred from the statistics which show the enormous sums that are invested in gasworks.

The process by which coal is distilled, purified, and distributed is simple enough, and any mystery that might be apparent about the works will be dispelled by a perusal of the treatise which has lately appeared from the pen of Mr. Colyer, an engineer who is



known as the author of some useful books on breweries, pumping machinery, lifts, &c. In his latest book, as in the others, Mr. Colyer gives the reader the benefit of his own experience, and illustrates his descriptions by illustrations which are copied from working drawings of executed works.

Gasworks do not meet with much favour from the owners and occupiers of property in towns, and the general wish is to have them relegated to some out-of-the-way site. Nor is this surprising, for the gasholders are generally as hideous as railway stations, and, besides, there is the element of risk. But a good deal depends on the position of the site, and it has been found that low-lying works can be flooded, and a town, in consequence, left in darkness. A site near a river, along which barges can pass, has the advantage of economy in the haulage of materials. The builder's work in connection with the works requires to be carefully constructed, and of somewhat greater strength than is expected in ordinary buildings. Mr. Colyer recommends that the least thickness in the walls of a retort-house should be 18 inches, and the concrete under the retort-benches 4 feet. A roof that has been found to answer well for houses of moderate size is one "of wood and close boarded, or of trusses made on iron with wood purlins, and close boarded." Wrought-iron girders are used for the coking stage, and the floor is made of 4-inch York stones or chequered plates. The coal stores should adjoin the retort-houses, and their size will be regulated by the character of the works. It is suggested that "the depth of the storage of the coals should not exceed 10 feet, and even less than this is advisable when floor space can be had." With a greater depth the lower strata of a heap is likely to be crushed, and thus deteriorated. Advice of this kind is valuable to a tyro, and there is plenty of hints of this kind scattered through the pages. The machinery that is used is fully described, as well as the tanks, purifying apparatus, purifiers, travellers, &c. Ample instructions are given in respect to gas-holders of various capacities, but it is said that "professional assistance should always be sought in all cases relating to gas-holder and tank construction, to avoid the serious errors many have fallen into, and consequent heavy money losses." The gas-holder and tank at Lower Sydenham cost 17,607*l.*, or 10*l.* 19*s.* 8*d.* per 1,000 cubic feet capacity. Another large gas-holder and tank, designed by Mr. Levesay for the South Metropolitan Gas Company, and which are believed to be the largest in existence, cost 47,000*l.* The capacity is 5,500,000 cubic feet, which is at the rate of only 8*l.* 10*s.* 8*d.* per 1,000 cubic feet.

The volume is illustrated by thirty folding plates, and, as is usual in Messrs. Spon's publications, are drawn with the greatest care. Mr. Colyer's meritorious work deserves to be in the hands of engineers and architects who may have to erect gasworks in this country or abroad.

NOTES ON BUILDING CONSTRUCTION. Part II. Second Edition. (Rivingtons.)

When the first volume of "Notes on Building Construction" appeared, we suggested that the work deserved a wider recognition than it was likely to attain, as one of the aids to the examinations of the Science and Art Department. We are glad to know that the three volumes which have been issued are in use among students in architects' offices, and it would be difficult to name a book that so exactly meets the wants of a beginner in the art of building. The second edition is distinguished from the first by two additional chapters. One is on excavations, shoring, and scaffolding. It describes the means adopted for the temporary sustaining of works above and below ground, and some of the principal varieties of scaffolds, derricks, cranes, lewis, &c. The second chapter is on foundations, and gives a general notion of what has to be done in dealing with secure and insecure foundations. The new edition is therefore an aid to that part of the syllabus of the Department which prescribes a knowledge of ordinary methods of timbering excavations, the use of piles in foundations, and the like. It was originally intended that the information should be given in a fourth series of "Notes," for the use of students who are ambitious of attaining honours in the examinations. We hope that the addition of the two chapters is not a sign that the publication of the fourth part has been abandoned. The author has such an ample knowledge of the science and practice of construction that he can hardly give the public too many books on building.

A MANUAL OF RULES, TABLES, AND DATA FOR MECHANICAL ENGINEERS. By DANIEL KINNEAR CLARKE, C.E. Third Edition. (Blackie & Son.)

The massive volume of a thousand closely-printed pages which Mr. Clarke compiled is of as much utility in an engineer's office as the "Imperial Dictionary" (which is likewise published by Messrs. Blackie) is in an ordinary library. The most tenacious memory could not at once recall the formulæ and tables which are needed in the profession from time to time, and in Mr. Clarke's "Manual" everything is found that is required for daily or for occasional reference. Practical geometry, mensuration, trigonometry, mathematical tables, weights and measures of all countries, weights of materials used in construction, mechanical principles, fuel, steam,

strength of materials, mills, gearing, the steam-engine, air machinery, hydraulics, friction, are among the subjects which are treated, and the entire of the information upon them is derived from the books and papers of engineers who are esteemed as specialists. The possessor of the volume has, in fact, an encyclopædia of engineering, and one in which speculation has been superseded by the results of practical experience in all parts of the world, and which have undergone many tests. In the list of authorities from whom information has been obtained we find the names of the foremost engineers of the nineteenth century. A book of this kind is beyond criticism, for it would be absurd in any individual to assume more knowledge on one of the subjects, much less on all, than is condensed in the pages. The third edition embodies the suggestions which have been offered to Mr. Clarke, as well as any late addition to engineering science. The reader has the satisfaction of knowing that whatever is stated in the "Manual" can be adopted with safety in dealing with materials, engines, or structures.

## WORKS IN PROGRESS.

**Messrs. Le Grand & Sutcliffe**, of London, have fixed seven additional Norton's registering turnstiles at the International Health Exhibition; these, together with those supplied by the same firm for the Fisheries Exhibition last year, will make up twenty entrances, and, with the provision thus made, it is calculated the visitors can readily enter in a steady stream at the rate of about 10,000 per hour.

**Artesian Wells.**—Amongst the contracts which Messrs. C. Isler & Co. have at present in hand, an 8-inch artesian bored tube well is being fixed at Messrs. Brooks, Shoobridge & Co.'s Cement Works, Grays. Among other works may be mentioned their new patent improved turnstile. The chief improvement in this is in the "clutch" arrangement, which is cast with four teeth, the bottom part being dovetailed so that when the machine is worked the lock is perfect, and not as with the old-pattern turnstile, which is worked by a foot lever; the whole pressure being put on it, this occasions frequent breakages, which cannot by any means happen with the new turnstile, as the whole pressure is put direct on the spindle. The clutch rides freely on the square part of the spindle, and gets released by a fork, which lifts it from a ridge cast on the top clutch. It also can be worked right or left, without disturbing the turnstile, but simply reversing the ratchet wheel in the top box.

**Messrs. J. Stott & Co.** have recently fitted their patent gas governors throughout Dover Castle and Barracks, the Milton Barracks, Gravesend; Chatham Convict Prison, the Wandsworth Prison, the Clerkenwell Sessions House, and York Castle; also the Warwick County Lunatic Asylum, where, in six months' time, a saving of over 60*l.* was effected, while cost of governors was only 82*l.*

**The Æolus Waterspray and General Ventilating Company, Limited**, whose business has passed into the hands of the late engineer of the Company, Mr. R. Oakley, 235 High Holborn, have recently applied their system with complete success to the Royal Academy, under the direction of Mr. Norman Shaw, R.A.; the Beckenham Town Hall, under Mr. George Vigers, and the banqueting hall of the Mercers' Company, under Mr. G. Baines Williams. Mr. Oakley has just received instructions from the Ecclesiastical Commissioners to apply the same system to the church of St. Peter's, Limehouse, under the direction of Mr. Ewan Christian.

**Dundee.**—The extension of the Harbour Trustees' Offices, and provision of a new board-room, has been completed from the designs of Messrs. C. & L. Ower, architects. The cost of the whole of the alterations, extension, and improvements is about 2,000*l.* The following are the contractors:—J. & C. Hay, masons, Dundee; A. Bremner, joiner; A. McRitchie, plasterer; D. Ramsay & Co., plumbers; Laburn & Lindsay, slaters; Gray & Dickson, G. H. Nicoll, and W. Johnston (Glasgow), ironmongers; Thomas Justice, J. Blacklaw, and E. Wilson & Son, cabinetmakers; J. Mackay & Son and D. Pirie, painters; Westwood, Son & Miller, blinds; J. Bryden & Son, bellhanging; Lion Foundry Company, railing.

**Mr. Frederick Sage**, of 80-84 Gray's Inn Road, has secured a large contract for show cases and office fittings at Messrs. Silber & Fleming's new premises, rebuilding in Wood Street, E.C.

**The Improved Wood-Block Flooring** of Messrs. Geary & Walker (late Andrews & Co.), of 7 John Dalton Street, Manchester, known as Geary's patent "Premier" system, is, we understand, being largely employed in many and various works of considerable importance, including hospitals, public offices, banks, clubs, churches, schools, &c. The advantage which the patent system offers in providing against what has hitherto greatly detracted from wood-block floors—the liability of the blocks to work loose—is worthy of notice. The blocks are secured to their



foundation by metal "keys" in such a manner that it is absolutely impossible for them to be disturbed by any ordinary means. Further, the special process which the blocks undergo is a certain preventative of dry rot, and they are laid so as to be perfectly impregnable to dampness. A system of wood-block flooring which possesses these advantages must, we imagine, be a success; and the merits of this "Premier" system are, we hear, being duly recognised by well-known architects. That wood-block floors are in every respect preferable to the ordinary floors cannot be doubted. It is certain they are now adopted more generally than formerly; and now that a proper method has been devised of "keying" the blocks, it will undoubtedly lead to the more frequent use of an effective and admirable flooring.

**Messrs. Suffling & Co.**, 143 Edgware Road, have just brought out a novelty in the way of stained glass. It is called the "Aquarium Window Screen." Fish of all kinds are painted on greenish tinted glass in such a manner as to give them the appearance of swimming in an aquarium surrounded by shells, rock, weeds, &c. This is environed by a margin of ruby and green glass, and the whole, when placed in a mahogany or oak frame, makes a very handsome screen for a dining-room or library window.

**Messrs. Hayward, Tyler & Co.**, of Whitecross Street, London, who five years ago erected the extensive sewerage pumping machinery of the Twickenham Local Board, for raising one and a half million gallons daily to a height of 60 feet (or 100 feet if required), have now contracted to supply and erect another large steam-pumping engine in the same works, to meet the increased demand of the district. The pumping machinery already at work has, we believe, performed its functions since its first starting without a single hitch, in spite of exceptional demands upon its capacity during wet seasons. Interesting drawings of this machinery are exhibited at the International Health Exhibition.

**Messrs. R. Waygood & Co.**, of Falmouth Road, Great Dover Street, have received an order from Messrs. Maple & Co. to supply one of their Patent Balanced Passenger Lifts at their premises, in addition to the other lifts now working there. Messrs. Waygood & Co. have also received the order for passenger, luggage, coal, and dinner lifts, with engines, boilers, pumps, &c., for Prince's Hotel.

## CHURCH BUILDING AND RESTORATION.

**Carlton Colville.**—The parish church has been reopened after restoration, which has been carried out under the direction of Mr. Howard Gaye, architect, Sevington Street, London. The cost of the works has been about 2,500*l*. Mr. Robert Morriss, of Ditchingham, was the contractor, the stonework being executed by Mr. Allen, of Beccles.

**Sale.**—The foundation-stone of the Roman Catholic church of St. Joseph has been laid. The building will provide accommodation for 400 persons, and is being built from the designs of Mr. W. H. Rawle, architect, the materials employed being red brick and terra-cotta.

**Helensburgh, N.B.**—A new Congregational church has been opened. The building consists of nave and chancel, together 87 feet long, and one side aisle, separated from the nave by an arcade supported on clustered columns of polished Peterhead granite, with richly carved capitals. The gable of the old church serves as the side wall of the aisle along the greater part of its length, so that there is only one window in the aisle; but there is no want of light, as the coupled lancet windows on the opposite side are lofty. The pulpit stands close to the east wall and behind it are benches for the choir. The pulpit is of oak, and is enriched with carving executed by Mr. John Craig, who also made the choir bench ends. What may be called the chancel is lighted by two lancets on each side at a considerable height from the floor, and by a wheel window in the gable filled with coloured glass, by Mr. Miller, of Glasgow. At the west side a small door gives access to the vestry, and near this in the aisle is a door of egress which also gives access to the old church, the vestry, and waiting-rooms. The roofs, and a small gallery at the end, next Princes Street, are of dressed timber darkly stained. The pews and other fittings are of pitch pine. The principal entrance is by a porch at the end of a side aisle next Princes Street. This and the gable adjoining are the principal architectural features of the exterior. The porch has a highly decorated doorway, with detached shafts in the jambs, with carved capitals, and a good deal of ornament in the arch mouldings. The inside is faced with ashlar, and there is a bench table on which rests arcading with detached shafts. The floor is of encaustic tiles. The gable towards Princes Street has a large four-light window, with tracery of a simple geometrical design, in keeping with the architecture throughout, which is that of the style which prevailed in the latter part of the thirteenth century. Beneath the window-sill an arcading extends between the buttresses. The width of the nave is 28 feet 6 inches, and the highest part of the roof exposed to view is 35 feet. The pews will accommodate 550 persons, allowing 20 inches to each. The contractors

were—John Jack, mason; Wm. Jack, wright; D. Dempster, slater; Wm. Thomson, plasterer; John Horn, plumber, all of Helensburgh. The carving was done by Mr. James Young, of Glasgow, and the painting by Messrs. J. W. McCulloch & Son, of Helensburgh. The heating apparatus is by Mr. Charles Ritchie, of Edinburgh. The architect is Mr. John Honeyman, Glasgow.

## SCHOOL BUILDINGS.

**Aston.**—New schools for Erdington. Six sets of designs were submitted in limited competition for the above, and on the award of Mr. E. R. Robson, F.S.A., architect to the London School Board, the designs of William Henman, A.R.I.B.A., of 38 Bennett's Hill, Birmingham, were selected, subject to a suitable tender being obtained within the stipulated expenditure of 3,500*l*., which had to include the school building for 460 children in two departments, a caretaker's residence, covered playground, the asphaltting of the whole of the playground, boundary walling, &c. On the invitation of the Board fourteen builders submitted tenders: that of Mr. W. Bennett, of Lozells, amounting to 3,277*l*., being the lowest, has been accepted, and the work is to be proceeded with so soon as the sanction of the Educational Department has been obtained.

**Bamber Bridge.**—New Wesleyan schools are about to be erected at Bamber Bridge, near Preston, from the plans, and under the superintendence of, Mr. David Grant, architect, Preston. Suitable accommodation is provided for 300 boys and girls and 100 infants, with ample and separate playgrounds.

**New Clee.**—New schools are about to be erected at New Clee, Great Grimsby, in connection with St. John's Church, for 300 children, from the designs of Mr. E. W. Farebrother, A.R.I.B.A., architect, Grimsby.

## GENERAL.

**The Private View** of the Summer Exhibition of the Nineteenth Century Art Society will take place to-day, Saturday, the 24th inst.

**The Royal Scottish Academy Exhibition**, which was opened in the beginning of February in Edinburgh, closed on Saturday last.

**The Death** is announced of M. Gustave Jundt, the well-known artist. M. Jundt was born in 1830 at Strasburg, and studied painting under Gabriel Guerin and Drolling. His best known pictures are the *Iles du Rhin*, *The Libellules*, *Retour de la Fête*, and *Dimanche Matin*.

**A Bronze Statue** is proposed to be erected in Derby as a memorial of the late Mr. Bass, and large sums of money have been already promised towards this object.

**Vosmaer's novel**, "*Amazone*," is about to be published in English. The translation has been made from the third Dutch edition, and arrangements have been made with Mr. Alma Tadema, R.A., by which the frontispiece originally drawn by him for the author will be used for the English edition.

**The Derbyshire Archæological Society** visited Southwell Minster on Saturday last, when the Rev. A. Sutton read a paper on the history and architecture of the building.

**The International Forestry Exhibition Buildings**, Edinburgh, are to be extended for nearly 6,000 square feet of space, mainly in consequence of a requisition from the Japanese Legation.

**The Italian Government** has concluded, through Professor Villari, the negotiations for purchasing the Italian manuscripts in the Ashburnham Library. The amount to be paid for them is 23,000*l*.

**The Monmouthshire County Magistrates** have instructed Mr. William Tanner, the county surveyor, to prepare plans for the erection of police buildings and court at Newport, at an estimated cost of 4,000*l*., and a new police-court at Chepstow.

**The Surveyors** of the Whitechapel Board of Works, who were commissioned to examine the new parish church of St. Mary, report that the building is in a state of disintegration, as demonstrated by numerous cracks and fissures and separation of main walls that have been going on steadily from week to week, these fissures varying from a hair's breadth to a quarter of an inch above ground.

**Govan.**—Contracts have been entered into for forming and enclosing the park which Mrs. John Elder intends presenting to the people of Govan, and for the erection of waiting-rooms, keeper's house, &c., and the construction of a large pond for model-boat sailing; and it is expected that the work will be finished in the autumn. The contractors are:—For cast-iron railings and gates, George Smith & Co.; for malleable ironwork, A. & J. Maise & Co.; for buildings and pond, Thomas Brown; and for forming roads, drainage, &c., John Murray. The whole is being carried out under the direction of Mr. Honeyman, architect, Glasgow.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MAY 24, 1884.

### COMPETITIONS OPEN.

**BURNLEY.**—July 1.—Plans are required for the Erection of Municipal Buildings, Police Courts, and Baths. Premiums of 200, 100, and 50 guineas. Mr. J. E. Stafford, C.E., Borough Engineer, Burnley.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**LEEDS.**—Plans required for Converting Gas Offices, Boar Lane, and Ground behind, into Restaurant, Hotel, and Bodega. Mr. John Milling (Messrs. Milling), Leeds.

**LLANELLY.**—May 31.—Plans are required for a School in Three Departments (Boys, Girls, and Infants). Mr. J. Jennings, Clerk to the School Board, Llanelly.

### CONTRACTS OPEN.

**BRADFORD.**—May 29.—For Building Two Wings and other Additions to the Eye and Ear Hospital. Messrs. W. & R. Mawson, Architects, Exchange Buildings, Bradford.

**BUCKIE.**—May 26.—For Building Dwelling-house and Offices. Mr. G. A. Bruce, Architect, Banff.

**COLNE.**—May 29.—For Construction of Reservoir on the River Laneslaw. Messrs. Bateman & Bill C.F., Albert Chambers, Albert Square, Manchester.

**COVENTRY.**—May 31.—For Alteration of Britannia Hotel. Mr. W. Langley, Architect, 18 Smithfield Street, Coventry.

**DERBY.**—May 28.—For Building Studies, Dining-hall, and other Premises, Repton Hall. Mr. John Shaw, The College, Derby.

**EARLSHEATON.**—May 27.—For Building Wesleyan Chapel. Messrs. Kirk & Sons, Architects, Dewsbury.

**ELLAND.**—May 29.—For Building House. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**FENNY STRATFORD.**—May 24.—For Works to Tower and North Aisle of St. Martin's Church. Mr. E. G. Bruton, Architect, 17 New Hall Inn Street, Oxford.

**HALIFAX.**—May 28.—For Pulling down Inn and Building Three Shops, Offices, House, &c. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

**HARPURHEY.**—May 24.—For Building Twelve Houses and Shop. Mr. Frank Richards, Architect, Venice Chambers, 61 Lord Street, Liverpool.

**KING'S LYNN.**—May 26.—For Erection of Buildings for Young Men's Society. Mr. E. J. Colman, Architect, Market Place, Lynn.

**KINGSBURY.**—May 26.—For Building Schools, Lavatories, &c. Mr. William Owen, Clerk to the Kingsbury School Board, Cliff, near Tamworth.

**LEEDS.**—May 26.—For Building Caretaker's House at South Accommodation Road Board School. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

**LICHFIELD.**—May 27.—For Alterations and Additions to Ogley Hay and Sheffield Board Schools. Mr. T. H. Fleeming, Architect, Waterloo Road, Wolverhampton.

**MARKET RASEN.**—June 7.—For Works to Parish Church Tower. Messrs. Charles Kirk & Sons, Architects, Slough.

**OLDHAM.**—May 27.—For Building Station at Mumps. The Engineer's Office, Hunt's Bank, Manchester.

**SEATON, DEVON.**—May 31.—For Extensive Additions to Beach House for an Hotel. Mr. Eggar, Architect, 57 Gower Street, Bedford Square, London.

**STOCKPORT.**—June 2.—For Alteration of Bank Chambers for Extension of Free Library. Mr. Peter Peirce, Architect, St. Petersgate, Stockport.

**STOURBRIDGE.**—May 28.—For Building Engine-house, Boiler-house, and Stack for Pumping Station. Mr. Harry Mills, 118 High Street, Stourbridge.

**WARDLEWORTH.**—May 27.—For Building Warehouse and Additions to Station. The Engineer's Office, Hunt's Bank, Manchester.

### TENDERS.

#### BARNET.

For Building House, Shop, and Premises, High Street, Barnet. Messrs. PRICKETT, VENABLES & Co., Surveyors.

Hammond . . . . .	£2,754	0	0
Cave . . . . .	2,660	2	8
Marriott . . . . .	2,632	0	0
Clark & Wright . . . . .	2,615	0	0
James . . . . .	2,485	0	0
Miskin . . . . .	2,380	0	0
Willenott . . . . .	2,300	0	0
Curnow . . . . .	2,253	0	0
Miller . . . . .	2,250	0	0
Oldrey . . . . .	2,200	0	0
Nash . . . . .	2,060	9	0

#### ABERGAVENNY.

For Building Villa Residence, Abergavenny. Mr. E. A. JOHNSON, Architect, Abergavenny. Quantities by the Architect.

FOSIER, Abergavenny (accepted) . . . . . £2,118 0 0

For Building Cottage Villa, North Street, Abergavenny. Mr. E. A. JOHNSON, Architect, Abergavenny. Quantities by the Architect.

Stephens . . . . . £330 0 0

Foster . . . . . 310 0 0

SHEEN (accepted) . . . . . 307 0 0

For the Construction of Boundary Walls, Footpaths, &c., at Bailey Park, Abergavenny, Mon. Mr. E. A. JOHNSON, Architect, Abergavenny.

THOMAS, Abergavenny (accepted) . . . . . £780 0 0

Entrance Gates and Railing.

HAMPSON & BROMLEY, Abergavenny (accepted) . . . . . £243 0 0

New Side-Fence Railing and Shrubbery Enclosure.

DAVIES, Abergavenny (accepted) . . . . . £239 0 0

#### BRIXHAM.

For Erecting Eight Houses, Brixham, Devon, for Mr. Pearce. Mr. G. SOUDON BRIDGMAN, Architect, Torquay.

Blatchford & Lea . . . . . £2,004 7 7

Wills & Tilley . . . . . 1,760 0 0

Rundle . . . . . 1,729 0 0

Conch & Patient . . . . . 1,698 0 0

HAZLEWOOD BROS., Brixham (accepted) . . . . . 1,689 0 0

#### CHUDLEIGH.

For Schoolmaster's Residence, Chudleigh, Devon, for Mr. W. Rouse. Mr. G. SOUDON BRIDGMAN, Architect, Torquay.

RABBICH, Chudleigh (accepted) . . . . . £297 10 0

For various Works for the Right Hon. Lord Clifford, Ugbrook Park, near Chudleigh, Devon. Mr. G. SOUDON BRIDGMAN, Architect, Torquay.

Hayes Farmhouse.

GILLIARD & BOVEY, Kingsteignton (accepted) . . . . . £495 0 0

Foster Villa Farmhouse.

YEOMAN, Kingsteignton (accepted) . . . . . 245 0 0

Upcott, Cattle Sheds.

BALL & SHAPLEY, Chudleigh (accepted) . . . . . 120 0 0

Waddon, Cottage.

BALL & SHAPLEY, Chudleigh (accepted) . . . . . 186 0 0

Waddon, Granary.

WIDDICOMBE & BARBAGE, Chudleigh (accepted) . . . . . 76 9 0

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a **Semi-Vitreous** nature, will maintain a clean and washable surface.

## FACING BRICKS AND BRICK ORNAMENT

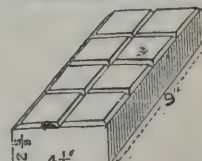
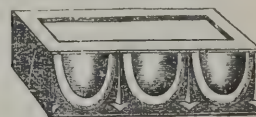
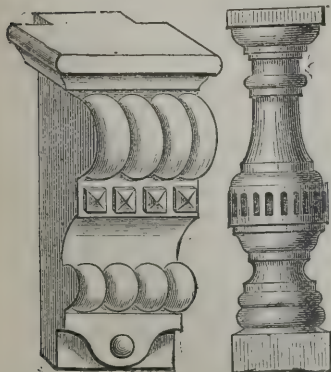
## TRUE TERRA-COTTA,

AS ALSO ARCHITECTURAL WORK,  
IN WHITE AND WARM-TINTED BUFF.

Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, and 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





## BOOTLE.

For Erection of St James's Church and Presbytery. Bootle. Messrs. M. E. HADFIELD & SON, Architects, Corn Exchange Chambers, Sheffield. Quantities by Mr. D. J. Brown.

	Nave, Aisles, Chancel and Chapels.	West End and Tower.	Upper part of Tower and Spire.	Presbytery.	Total.
Fogarty . . . . .	£13,126 17 3	£5,058 0 0	£3,045 0 0	£2,889 0 0	£24,118 17 3
Thornton & Son . . . . .	12,350 0 0	5,100 0 0	2,700 0 0	3,015 0 0	23,165 0 0
Ray . . . . .	12,270 0 0	4,874 0 0	3,090 0 0	2,878 0 0	23,112 0 0
Mulholland & Son . . . . .	11,400 0 0	4,555 0 0	3,278 0 0	2,867 0 0	22,100 0 0
Leslie & Sons . . . . .	11,311 0 0	4,925 0 0	3,015 0 0	2,836 0 0	22,087 0 0
Webster . . . . .	11,200 0 0	4,660 0 0	3,047 0 0	2,786 0 0	21,633 0 0
Gabbutt . . . . .	11,199 0 0	4,501 0 0	2,699 0 0	*2,699 0 0	20,998 0 0
Woods & Son . . . . .	*10,500 0 0	4,250 0 0	2,220 0 0	2,700 0 0	19,670 0 0

\* Accepted.

## HANLEY.

For Building Presbyterian Church at Hanley. Mr. GEO. W. BRADFORD, Architect, Hanley. Quantities by the Architect.

	New Church.	Foundations.	Total.
Lowe & Sons, Burton . . . . .	£2,292 0 0	£288 0 0	£2,580 0 0
Bullock, Wellington . . . . .	2,345 0 0	190 0 0	2,535 0 0
Godwin, Hanley . . . . .	—	—	2,450 0 0
Bradney & Co., Wolverhampton . . . . .	2,085 0 0	307 0 0	2,392 0 0
Bennett, Burslem . . . . .	—	—	2,330 0 0
Gibson, Tunstall . . . . .	2,100 0 0	179 10 0	2,279 10 0
Cornes, Hanley . . . . .	2,000 0 0	225 0 0	2,225 0 0
Inskip, Lonsdon . . . . .	2,010 0 0	175 0 0	2,185 0 0
Gallimore, Newcastle . . . . .	1,890 0 0	185 0 0	2,075 0 0
ELLIS, Hanley (accepted) . . . . .	1,884 0 0	181 0 0	2,065 0 0

## Heating Apparatus.

	Heating Church.	Removing present Boiler.
Jackson, Newcastle . . . . .	£62 10 0	—
KING & Co., Liverpool (accepted) . . . . .	52 0 0	10 0 0

## BAMBER BRIDGE.

For Wesleyan School, Bamber Bridge, near Preston. Mr. D. GRANT, Architect, Preston.

## Accepted Tenders.

Croft, brickwork . . . . .	—
Williamson & Sons, stonework . . . . .	—
Hill, woodwork . . . . .	—
Clarkson, slating, &c. . . . .	£1,978 0 0
Swarbrick, plastering . . . . .	—
Croasdale, plumbing, painting, &c. . . . .	—
Metcalf & Dilworth, heating . . . . .	—

## BROMLEY.

For Conservatory and Repairs to a House, Elmfield Road, Bromley. Mr. ST. PIERRE HARRIS, Architect.

Crosley . . . . .	£142 0 0
Taylor & Son . . . . .	139 0 0

## DARTMOUTH.

For Three Cottages, Kingswear, Dartmouth, Devon, for Mrs. Barne. Mr. G. Soudon Bridgman, Architect, Torquay.

Short Bros. . . . .	£597 0 0
Rundle . . . . .	587 0 0
Winsor . . . . .	540 0 0
Pack . . . . .	524 0 0
Foadon . . . . .	498 19 0
Guy . . . . .	480 0 0
WILLS & TILLEY, Brixham (accepted) . . . . .	468 0 0

## EBBW VALE.

For Erection of Police Buildings, Ebbw Vale, Monmouthshire. Mr. WILLIAM TANNER, County Surveyor, Architect. Quantities by the Architect.

Foster, Abergavenny . . . . .	£1,990 0 0
Moore & Son, Newport . . . . .	1,877 0 0
Welsh, Hereford . . . . .	1,848 0 0
Jones & Son, Newport . . . . .	1,837 0 0
Brind, Newport . . . . .	1,710 0 0
Burgoyne, Blaenavon . . . . .	1,700 0 0
Davies, Cardiff . . . . .	1,650 0 0

## FARNBOROUGH.

For Additions and Alterations to Wellbrook Cottage, Farnborough, Kent. Mr. ST. PIERRE HARRIS, Architect.

TAYLOR & SON (accepted) . . . . .	£314 0 0
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No competition.

## FRECKLETON.

For New Wesleyan Chapel and Schools, Freckleton, near Kirkham. Mr. DAVID GRANT, Architect, Preston.

## Accepted Tenders.

Singleton, brickwork . . . . .	—
M. Gardner, stonework . . . . .	—
J. Gardner, woodwork . . . . .	—
Croasdale, plumbing, painting, &c. . . . .	£1,286 0 0
Righty, plastering . . . . .	—
Bradshaw, slater . . . . .	—
Metcalf & Dilworth, heating . . . . .	—

## GRANTHAM.

For Building Co-operative Stores, St Peter's Hill, Grantham.

RUDD & SON (accepted) . . . . .	£2,780 0 0
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## HALIFAX.

For Building Two Houses and Shops, at Hope Hall, Halifax. Mr. JOSEPH WILSON, Architect.

Bland, mason . . . . .	£205 0 0
Pielfield & Bottomley, joiner . . . . .	122 0 0
Blackburn, slater and plasterer . . . . .	53 0 0
Nettleship, plumber and glazier . . . . .	14 10 0

## HASTINGS.

For Alterations to Premises known as Rutland House, Cambridge Road, Hastings. Mr. A. W. CROSS, A.R.I.B.A., Architect, Hastings and London.

Vigor . . . . .	£546 0 0
Avs . . . . .	490 0 0
Rodda . . . . .	465 19 0
Vidler . . . . .	443 0 0

## KIDDERMINSTER.

For House and Studio for Mr. Geo. Lees, at Kidderminster. Mr. J. Mossop, A.R.I.B.A., Architect. GLYNN, Kidderminster (accepted)

## LONDON.

For Enlargement of North Bow Schools, for the London School Board. Mr. E. R. ROBSON, Architect.

F. & F. J. Wood . . . . .	£8,976 0 0
Pritchard . . . . .	8,707 0 0
Goodman . . . . .	8,660 0 0
Shurmer . . . . .	8,598 0 0
Bangs & Co. . . . .	8,542 0 0
Steel Bros. . . . .	8,524 15 0
Perry & Co. . . . .	8,354 0 0
Wall . . . . .	8,249 0 0
Atherton & Latta . . . . .	8,238 0 0
Hunt . . . . .	8,224 0 0
Jerrard . . . . .	8,089 0 0
Wall Bros. . . . .	8,075 0 0
Stimpson & Co. . . . .	7,770 0 0

For Erection of Board School, Daubeney Road. Mr. E. R. ROBSON, Architect.

F. & F. J. Wood . . . . .	£19,546 0 0
Goodman . . . . .	18,477 0 0
Jackson & Todd . . . . .	18,214 0 0
Wall . . . . .	18,184 0 0
Hart . . . . .	18,149 0 0
Bangs & Co. . . . .	18,082 0 0
Pritchard . . . . .	17,995 0 0
Perry & Co. . . . .	17,980 0 0
Boyce . . . . .	17,950 0 0
Cox . . . . .	17,898 0 0
Shurmer . . . . .	17,892 0 0
Wall Bros. . . . .	17,789 0 0
Hunt . . . . .	17,214 0 0
Jerrard . . . . .	17,139 0 0
Stimpson & Co. . . . .	17,055 0 0

For Alterations to Board Schools, Old Ford. Mr. E. R. ROBSON, Architect.

Robsy . . . . .	£205 0 0
F. & F. J. Wood . . . . .	155 10 0

For Teacher's House at Board School, Mantua Street. Mr. E. R. ROBSON, Architect.

Hobson . . . . .	£547 0 0
Lathey Bros. . . . .	427 0 0
Rice . . . . .	419 0 0

For Erection of an Ambulance Station at Homerton, for the Metropolitan Asylums Board. Messrs. A. & C. HANSTON, Architects.

Boyce . . . . .	£11,119 0 0
Nightingale . . . . .	10,937 0 0
Magee & Co. . . . .	10,725 0 0
Wall Bros. . . . .	10,713 0 0
Stephens & Bastow . . . . .	10,499 0 0
Shurmer . . . . .	10,440 0 0
Holland . . . . .	10,335 0 0
Howell & Son . . . . .	10,200 0 0
Garrud . . . . .	10,181 0 0
Chafen . . . . .	10,030 0 0
Brown . . . . .	9,978 0 0
Josolyne . . . . .	9,198 0 0

For Erection of a Lamp Factory, No. 1 Cross Street, Great Sutton Street, Clerkenwell, E.C., for Mr. J. E. Drummond. Mr. THOMAS DURRANS, Architect, 44 Upper Baker Street.

Clarke Bros. . . . .	£2,250 0 0
Howard . . . . .	2,268 0 0
Edgar . . . . .	2,239 0 0
Butcher . . . . .	2,215 0 0
Batchelder . . . . .	2,036 0 0
Kirk & Randall . . . . .	2,000 0 0
Brass . . . . .	1,993 0 0
Culls & Son . . . . .	1,927 0 0
H. & E. Lea . . . . .	1,872 0 0
Mattook Bros. . . . .	1,777 0 0
BOLDING (accepted) . . . . .	1,677 0 0

For the Erection of New Premises, Nos. 211 and 212 Tottenham Court Road, for Messrs. Hewetson & Milner. Messrs. BATTERBURY & HUXLEY, Architects.

J. & C. Bowyer . . . . .	£3,335 0 0
Manley . . . . .	3,269 0 0
Higgs & Hill . . . . .	3,220 0 0
Dixon . . . . .	3,133 0 0
Holliday & Greenwood . . . . .	3,077 0 0
Patman & Fotheringham . . . . .	2,983 0 0
NIGHTINGALE, Lambeth (accepted) . . . . .	2,769 0 0

For Additions to the Station in Commercial Road, for the London Salvage Corps. Mr. WIMBLE, Architect.

Hall, Biddall & Co. . . . .	£3,990 0 0
Laurence & Sons . . . . .	3,784 0 0
J. & J. Greenwood . . . . .	3,762 0 0
Grover . . . . .	3,753 0 0
Ashby & Horner . . . . .	3,725 0 0
Murter . . . . .	3,693 0 0

For Alterations to the Horns Public House, Hackney Road. Messrs. BIRD & WALTERS, Architects.

Patman & Fotheringham . . . . .	£248 0 0
Birch & Co. . . . .	881 0 0
Williams & Son . . . . .	856 0 0
Shurmer . . . . .	837 0 0
Anley . . . . .	830 0 0
Marr . . . . .	825 0 0
Jackson & Todd . . . . .	759 0 0

For the Erection of Studio, No. 54 Park Road, Haverstock Hill, for Mr. H. Tuck. Messrs. BATTERBURY & HUXLEY, Architects.

EDDY (accepted) . . . . .	£402 0 0
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For Heating Adelphi Works, Accrington, and Hurst Lea, Sevenoaks. BACON & Co. (accepted).

For Repairs, Painting, &c., at South Villas, Camden Square. Mr. ROBERT REID, Surveyor.

COLWILL (accepted).

## LOWESWATER.

For Restoration of Loweswater Church. Mr. WILLIAM DEIGHTON, Architect.

GREEN, Parshaw (accepted) . . . . .	£800 0 0
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The above was the only full tender.

## HARROGATE.

For Enlarging St. George's College, Harrogate. Mr. ARTHUR HISCOE, Architect, Grosvenor Chambers, Harrogate. Quantities by the Architect.

## Mason's Work.

Wilson, Leeds . . . . .	£174 10 0
Frost, Harrogate . . . . .	145 0 0
Whincup & Dickenson, Harrogate . . . . .	143 0 0
Bielly, Harrogate . . . . .	140 10 0
Simpson, Harrogate . . . . .	133 10 0
Birkenshaw, Harrogate . . . . .	129 13 0
Ellis, Harrogate . . . . .	128 0 0
Winterburn, Harrogate . . . . .	119 0 0
Gospel, Harrogate . . . . .	103 0 0

## Joiners.

Aceson, Leeds . . . . .	190 10 0
Robinson, Leeds . . . . .	110 0 0
Topham, Harrogate . . . . .	88 0 0
Walker, Rawdon . . . . .	81 10 0
Horne, Harrogate . . . . .	84 0 0
Fizzard, Harrogate . . . . .	76 0 0
Chippendale, Harrogate . . . . .	65 15 0
Mawson, Harrogate . . . . .	65 0 0

## Plumbers and Glaziers.

Woffenden, Leeds . . . . .	11 14 0
Scholes, Harrogate . . . . .	10 0 0
Foster, Harrogate . . . . .	10 0 0
Lazenby, Leeds . . . . .	10 0 0
Bellerby, Harrogate . . . . .	9 5 0
Cartman, Harrogate . . . . .	9 0 0
Cartwright, Harrogate . . . . .	8 10 0
Ellis, Harrogate . . . . .	8 10 0

## Plasterers.

Chaffer, Otley . . . . .	23 1 4
Smith & Sons, Castleford . . . . .	21 0 0
Fortune, Harrogate . . . . .	21 0 0
J. Laycock, Otley . . . . .	21 0 0
W. Laycock, Harrogate . . . . .	18 10 0

## Slaters.

Smith & Sons, Castleford . . . . .	20 0 0
Pickles Bros., Leeds . . . . .	18 10 0
Thornton, Otley . . . . .	13 10 0
Watson, Leeds . . . . .	12 18 0
Shepherd, Harrogate . . . . .	11 17 6
Baynes, Harrogate . . . . .	11 9 0

## Whole of Works.

Wilson Bros., Knaresborough . . . . .	287 0 0
Topham, Harrogate . . . . .	253 0 0
Chippendale, Harrogate . . . . .	246 0 0
Winterburn, Harrogate . . . . .	223 7 0

## KENILWORTH.

For Manufacture and Erection in Kenilworth of Two 12-horse power Gas Engines, and Two Sets of Three-throat Pumps, for Kenilworth Water Works. Mr. E. PURCHARD, M.I.C.E., Engineer, London and Birmingham.

## Contract No. 2.

	"Otto."	"Cl-rk."
Young & Co., London . . . . .	£3,510 0 0	£3,510 0 0
Hatton, Coventry . . . . .	No tender	1,668 10 6
Pratt & Pitt Bros., Carlisle . . . . .	1,500 0 0	1,500 0 0
Crossley Bros., Manchester . . . . .	1,499 5 0	No tender
Glenfield Co., Kilmarnock . . . . .	1,418 0 0	1,355 0 0
PERRY & Co., Birmingham . . . . .	1,260 0 0	1,200 0 0
(accepted) . . . . .	1,161 10 0	1,161 10 0
Glover & Sons, Warwick . . . . .	1,161 10 0	1,161 10 0

For Pumping Station, Pipe-laying, and Water Tower, for Kenilworth Water Works. Mr. E. PURCHARD, M.I.C.E., Engineer, London and Birmingham. Quantities by Mr. E. J. Purnell, Coventry.

## Contract No. 3.

Haywood, jun., Coventry . . . . .	£1,700 0 0
Turner, Wolverhampton . . . . .	4,608 8 7
Currall & Lewis, Birmingham . . . . .	4,147 0 0
Evans Bros., Wolverhampton . . . . .	4,062 0 0
G. F. Smith, Leamington . . . . .	3,988 0 0
Fell, Leamington . . . . .	3,850 0 0
Stinson & Kellett, Leicester . . . . .	3,678 18 0
Holme & Kilne, Kenilworth . . . . .	3,643 0 0
Hilton & Sons, Birmingham . . . . .	3,620 0 0
Biggs, Handsforth . . . . .	3,600 0 0
Dickson, St. Albans . . . . .	3,593 0 0
Law, Kidderminster . . . . .	3,537 0 0
E. SMITH & SON, Kenilworth . . . . .	3,378 0 0
Corrie, Lichfield . . . . .	3,321 0 0

\* Accepted (lowest schedule of prices).



## ORPINGTON.

For Painting and Repairs to Houses at Orpington, Kent	
M <sup>r</sup> . ST. PIERRE HARRIS, Architect.	
Taylor	£202 0 0
Hart Bros.	173 0 0
Smallwood	150 0 0
W. & F. CROAKER (accepted)	117 0 0

## PORTSMOUTH.

For the Erection of New Mission Hall in rear of Sailors' Rest, Commercial Road, Landport, Portsmouth.	
Messrs. DAVIS & EMANUEL, Architects. Quantities supplied by Mr. H. P. Foster.	
Ward	£1,479 0 0
Cooper	1,470 0 0
H. & W. Evans	1,420 0 0
Roberts	1,376 0 0
W. R. & C. Light	1,349 0 0
BURBRIDGE (accepted)	1,283 0 0

## SEATON.

For Building Two Cottage Houses, Seaton, for Captain Beck. Mr. JAMES HOWES, Architect, Workington.	
Mann, Workington, waller and mason	£175 0 0
Sandlands, Seaton, carpenter and joiner	98 0 0
Young, Workington, plasterer	39 0 0
Walker, Workington, smith and plumber	10 10 0
Sherwood & Armstrong, Workington, painter and glazier	8 10 0
Slater (not let)	45 0 0
Total	£376 0 0

## STOCKTON-ON-TEES.

For Building Church of St. Paul, Stockton-on-Tees. Mr. J. P. PURCHETT, Architect, Darlington. Quantities by the Architect.	
Accepted Tenders.	
Boyd, Cleasby, mason	£1,471 0 0
R. & S. Adamson, Gainsford, joiner	652 10 0
Lambert, Middlesbrough, plumber	138 14 2
Wanders & Son, Darlington, slater	125 0 0
Eolus Company, London, heating	109 0 0
Metcalfe, Darlington, painter	33 7 0
Total	£2,530 1 2

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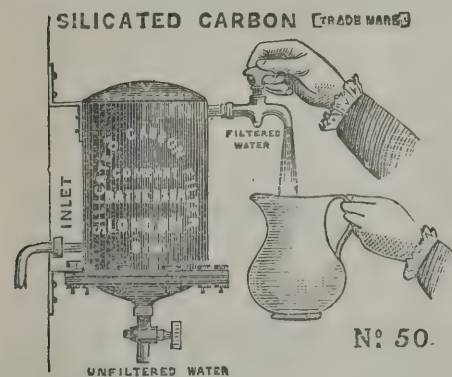
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## LISMORE.

For Additions and Alterations to Ballyduff Church, Lis- more, County Waterford. Mr. WALTER G. DOOLIN, M.A., Architect, 20 Ely Place, Dublin.	
Croodon, Fermoy	£1,611 3 9
Redmond, Aidan, Lismore	1,560 0 8
NEWSTEAD, Fermoy	1,547 4 0
J. & J. Pemberton, Dublin (withdrawn)	1,300 0 0

\* Accepted, subject to amendments.

## SWINDON.

For Erection of Clifton Street Board Schools, for the Swindon School Board. Mr. W. H. READ, Architect, Corn Exchange, Swindon. Quantities by Messrs. Benison & Bargman, 16 Essex Street, Strand.	
Snell, Maidenhead	£5,513 15 4
Ro siter, Bristol	5,340 0 0
W. J. & C. S. Young, Salisbury	5,100 0 0
King, Gloucester	5,088 0 0
Welch, Hereford	4,950 0 0
Gibson, Exeter	4,880 0 0
Howell & Sons, Bristol	4,880 0 0
Williams, Swindon	4,790 0 0
Stephens & Bastow, Bristol	4,750 0 0
Jones, Gloucester	4,750 0 0
Phillips, Swindon	4,749 0 0
Kingerlee, Oxford	4,595 0 0
Wiltshire, Swindon	4,554 0 0
Beavan, Bristol	4,550 0 0
BARRETT, Swindon (accepted)	4,500 0 0
Cowley, Cheltenham	3,169 15 0

## VENTNOR.

For Additions to Southlands, at Blackgang, near Ventnor, for the Isle of Wight Sanatorium, Limited. Contract No. 1. Mr. JOHN G. LIVESAY, A.R.I.B.A., Architect. Quantities supplied.	
Coleman, Niton	£1,660 1 0
Hayles, Niton	1,638 15 0
Ingram & Son, Ventnor	1,550 0 0
Baldwin, London	1,453 0 0
Jolliffe & Sons, Ventnor	1,393 0 0
SILSBURY & KINGSWELL, Ventnor (accepted)	1,246 0 0

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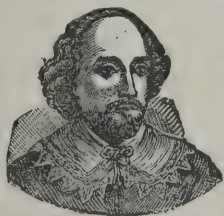
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## TIPPERARY.

For Works at Bansha Parish Church, County Tipperary. Mr. WALTER G. DOOLIN, M.A., Architect, 20 Ely Place, Dublin	
Newstead, Fermoy, County Cork	£1,085 2 10
Brien, Cashel, Tipperary	792 0 0
R. & G. Cussen, Templemore	733 0 0
MAHER, Roscrea (accepted)	578 14 0

For Erection of Teacher's House, at Burncourt, Cahir, County Tipperary, for the Rev. Thos. McGrath, P.P. Mr. WALTER G. DOOLIN, M.A., Architect, 20 Ely Place, Dublin.	
Nolan, Waterford	£257 0 0
Roles, Cahir	244 0 0
WARD, Clogheen (accepted)	240 0 0

## WAKEFIELD.

For Building Two Houses, Thorne Lane, Wakefield. Mr. JOHN VAUGHAN, Architect. Quantities by the Architect.	
Fawcett, bricklayer and mason	£138 6 8
Squires, carpenter and joiner	82 0 0
Rycroft, slater	19 10 0
Tattersall, plasterer	18 19 11
Dickinson, plumber	17 0 0
Jowitt, painter	3 10 0

Total . . . £279 6 2

All of Wakefield.

## WALTHAMSTOW.

For Erection of St. Gabriel's Mission Church, Walthamstow. Mr. J. J. BRASSEY, Architect.	
A. Reed	£2,553 0 0
Rider & Son	2,401 0 0
Egan	2,388 0 0
Morter	2,370 0 0
Bangs & Co.	2,286 0 0
Harris & Wardrop	2,269 0 0
J. A. Reed	2,261 0 0
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Scott	2,100 0 0

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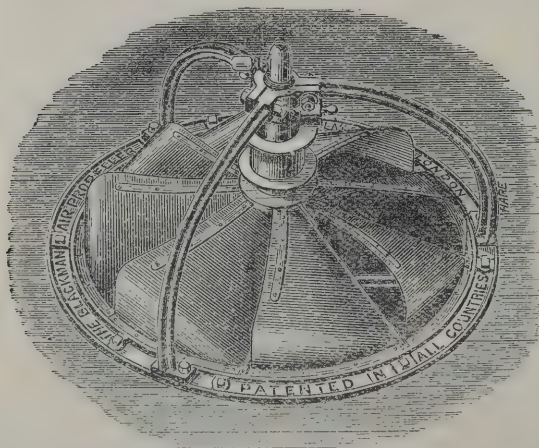
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# The Architect.

## SOME PRACTICAL RESULTS OF THE CONFERENCE OF ARCHITECTS.



HERE ought, of course, to be some practical good done as the outcome of a general professional gathering like the Conference of Architects which has just been held. It is true it was not numerously attended. Perhaps the attendance was not even so representative as it might have been. Except at one of the meetings—the very odd meeting, many will call it, of the Associates of the Institute—there was but little enthusiasm manifested. The subjects selected for discussion were not often of a promising order. There was a remarkable absence of the leaders—if there are any leaders now—of the London profession. In almost every sense, perhaps, the Conference was not worthy of the name. And yet it would be most unlikely that it should result in nothing, even if it were not much better—and we do not think it was—than a fortuitous concourse of atoms architectural. For indeed there is so much that wants doing in the architectural world of England just now, that for twenty or thirty architects to meet together without doing something is almost impossible.

There is this peculiarity, moreover, about our architectural conferences, that they take something like the form of the popular meetings, of the minor sort, that are held in Trafalgar Square. Anybody may come and go as he pleases, and everybody may say his say if he can. Artist architects from both town and country, business architects, archæologists, amateurs and foreigners, surveyors, builders, auctioneers, assistants, pupils, and all sorts of accessories to architecture, real or imaginary, outsiders or insiders, are equally welcome to listen, and equally welcome to talk. Those who consider this a sign of weakness may console themselves, however, on the present occasion with the reflection that the results of the medley have been unexpectedly significant. For, although the meetings of the Conference were, as a rule, neither large nor representative, there can be no doubt that they were both earnest and authoritative: the right men were there, and they made themselves heard.

A more unpromising subject than "the duties, obligations, and mutual relations of architect and contractor, with reference to English and foreign practice," could not very well be hit upon for starting such a Conference. It was not at all likely that any other country could in these days teach England a lesson in the art of commercial contracts; except, perhaps, America or Australia, whose arrangements after all might only be a little too pronounced in sharp practice, of which we have enough. Not long ago someone told us of the Australian way of receiving tenders from builders. The Australian architects do not open the sealed offers, as ours do, in the presence of the competitors or their representatives, who solemnly take down the figures and send them to the journals for publication; the tenders are opened in private, the most favourable is selected, the contract is signed, and *then* the figures are divulged! Even the Americans, after this, may probably feel almost disposed (in their own phraseology) to "take a back seat"; but in England it is more to the purpose to say that the architect who indulged in such a pleasantry might come before long to hear the opinion of a court of law upon it. In France and Germany, on the other hand, and Spain (for some inexplicable reason quoted) it was not to be supposed that an English contractor would find anything to better his position; and, in short, the outcome of the discussion was simply this—that the English mode of bargaining is clearly the best, and can scarcely be improved upon except in one respect, namely, that the bill of quantities ought to be made the basis of the contract, and speculative risks, as far as possible, thus avoided. One other point was made in connection with this: that an architect, especially in the country, must be allowed to be his own quantity surveyor if he thinks fit, provided of course the work be honestly and efficiently done. These two principles, indeed, may be said to have been unexpectedly established by the

Conference; and many of our readers will see at once that they constitute two very important and significant steps in advance in the direction of liberality of practice. It was only the other day that the Council of the Institute took upon itself, wholly without authority, to publish the outrageous intimation that a member who participated in quantity-work would run a risk of being arbitrarily expelled; we apprehend this is now to be forgotten as an accidental error. On the other hand, the builders have been clamouring for years in vain for the introduction of the bill of quantities into the contract, and now they are practically at liberty to insist upon it.

The education, or want of education, of the English architect, and the long-debated question of giving him a professional diploma, constituted what appeared to be something more attractive as another subject for discussion; but we cannot say that very much was accomplished here in the direction anticipated. The French system was almost exhaustively explained once more, and a sufficiently full account was added of the German system. No doubt could be entertained of the great superiority of both so far as regards academical training, nor could it be denied in either case that the honour and glory of academical recognition are sufficiently developed. In Spain it was discovered that "throughout the length and breadth of the land no one can practice as an architect who has not received the diploma of the Architectural School of Madrid," an ordinance which seemed, even to the most sanguine of our votaries of the diploma, to carry the matter a little further than might be quite practicable, or even perfectly convenient, in England. In short, it was pretty fairly explained that the Continental habit of dragooning—outdragooned in the peninsula—to which Englishmen have such an inveterate dislike, is made to exercise in such a thing as architecture an influence which is thoroughly characteristic, to say the least. But when closely looked at, what comes of it? The drill, no doubt, is most effectual, so far as drill goes. The uniformity of mind which some of us admire so much, and more of us so little, is no doubt exceedingly well accomplished. But, after all, was it not clear—unexpectedly clear indeed—that our English no-education could still hold its own? Granting all that was claimed—actually everything that could possibly be claimed—for the system of eight or ten, or even fifteen years' drill on the Continent, the common sense of the meeting could not help reverting to the English plan as being both more businesslike for the public and more satisfactory for the individual. The Frenchman, as was truly said, is a little too willing now and then to work for "*la gloire*"; the German, it might have been added, is equally led away sometimes by the attractions of mere scholarship; and if both fly over the head of the Englishman, so let them fly. Our practical office pupilage, in short, in spite of all that could be said against it, was found to be on the whole the right thing for the practical character of English architectural work. No one need wish to deny the fact that we could take a little more scholarship from the Germans, and a good deal more manipulative dexterity from the French, and no one need hesitate to advocate the adoption of measures to bring about both better instruction and a better recognition of it; but here again an unexpected result of the Conference was that it left us better satisfied with our own way than any one could have thought we ought to be, and we shall probably for some time to come hear less of the necessity for either *ateliers* or diplomas. That we ought to have schools and examinations is another question; and so far the opinion of the Conference was unmistakably in the affirmative.

On "the Tenure of Land for Building Purposes," although here again the subject seemed peculiarly unpromising, it may be said that what came about was once more both unexpected and significant. The debate upon this question was in some respects the best of all; and some very plain truths were told, perhaps the more readily because the paper which led the discussion was intentionally made a little too void of offence. That the leasehold system of tenure has many inconveniences attached to it was made very plain. But how to improve upon it was certainly not made so plain. Perhaps we may say that the difficulty of dealing with the question of specific improvement was what became most prominent as the result of the debate. The law of property in land, everywhere and under all conditions, even the most primitive, is a purely conventional disposition of things which cannot avoid offending somebody; and it may be said that, the more complex and intricate the



circumstances are, the more open to abuse do the arrangements become. We cannot help this. But the case is all the more manifestly one for continual legislation: the ordinary principles of free trade do not seem to apply. As an illustration, take the operation of the recent change in the game laws. It used to be held that the squire and his tenant ought to be left entirely free to make their own bargain in their own way. The result was that the squire ate up the tenant's crops, and still asked for his rent. The Legislature interfered, and the immediate result is that the farmers now tell the landlord who "reserves" the game to "reserve" the land as well. Legislation something like this seems to be becoming necessary for London as regards building leases. But what shape it ought to take is not yet clear, and this is the result with which for the present we may be satisfied; the question at any rate is on the move.

In spite of all drawbacks, the recent Conference of Architects, in these and some other matters, has done sufficiently good work to induce us to be thankful, and to express a hope that the next may be convened at an early date, and that it may be much more carefully organised for the attainment of definite ends. The very remarkable *authority* which a free and open public gathering somehow acquires has in the present instance been fully illustrated.

## EXHIBITION NOTES.—THE ROYAL ACADEMY.—II.

THE report goes that an unusual amount of good average landscape work had to be rejected this year by the Academy owing to pressure on space. Of "nice studies of birch trees and water," after the manner which ushered Mr. ERNEST PARTON into notice, there was quite a flux, for instance. What difference a more liberal admission might have made we cannot say, but certainly the present exhibition is not distinctive for landscape excellence, although a great deal of fairly meritorious quality is to be found. Some of the best stuff in this kind belongs to the school of landscape genre, as in the poetic pastoral by Mr. R. W. MACBETH, *Fen Farms*—a girl calling the cattle home at eventime, when the light is soft upon slow winding river and low banks; and, again, in TOM LLOYD's glowing picture of reapers at work cutting *The Golden Grain*; and in the delightful incident of summer days on the Thames, *Benson Ferry*, a somewhat new departure, by G. G. D. LESLIE, R.A.; and yet another sunny river scene by Mr. GREGORY, A., *Intruders*, a small but masterly study of swans disturbing two girls, of whom one stands on the landing-stage, and the other sits in a boat beside a boat-house in a green nook. Mr. LEADER, A., and Mr. KEELEY HALSWELLE abide with rather tiresome fidelity to subjects and effects of which they have made a specialty. The latter in weeds, water, and heavy clouds, the former in sunset over low lands, glistening with flood or recent rains. Mr. LEADER's *Glebe Farm on the Welsh Border* is, however, a solidly painted and faithful picture, with that breadth and unity of effect which is wanting to so much of the picturesque landscape study of younger men. The colouring of Mr. W. B. DAVIS, A.R.A., has of late years affected an over lurid iridescence, but no one composes a landscape of lake and hill under irradiating glow of midday or sunset with more thorough knowledge and management of material. *On the Hillside Clearing after Rain* is admirably atmospheric. The same cannot be said of two ambitious pictures by Mr. PETER GRAHAM, R.A. *Dawn* is a flashy performance, without truth of scale or relation; and the better picture of the two, *Sea Mist*, has a flimsiness that makes one regretfully remember the sturdy work with which first the Scotch artist startled the Southerners. One of the steadiest of the school north of the Tweed is Mr. JOHN SMART. *The Land of the Macgregor* has been hung high in the central room, but its somewhat scenic vigour makes it tell. We have marked an impressive picture of the English lake country, *Nightfall under Crossfell*, by Mr. T. H. MCLACHLAN, whose name seems to have come from over the Border. Mr. DAVID MURRAY, an Edinburgh artist of repute as a landscapist, has taken good place in our exhibitions this year, claiming the line at the Grosvenor and Burlington House, and winning the honour of a purchase under the Chantrey bequest. There is more finesse and detail about his reading of nature than is common to his countrymen. He does not generalise, though he may eliminate, and the effects

ready to hand and easiest to apprehend are not those which charm him most. Perhaps the excellence of his drawing is best shown in the work selected by the Academy, *My Love is Gone a' Sailing*, which challenges successfully difficulties of a wide range of view over a country of broken levels and diversified character; but the somewhat hot and brilliant palette of the painter deals with a romantic and lovely scene in the sunset glow over *Loch Linnhee*, while the charm of a significant tree touch is felt in the Grosvenor picture of autumn woods, entitled *Leaves have a Time to Fall*.

MISS MONTALBA's Dutch pictures are full of that charm of character and swift security of effect which belong to her talent. Only one has gone to the Academy, *Middelburg*, a picturesque agglomeration of red and brown roofs, walls, and trees, all aglow in orange evening light. The style is not of the English school, and is the more welcome, as landscapes painted under Continental influence, Impressionist or other, do not abound this year.

A few pictures directly from French studios have found their way to the walls, notably *La Nuit*, by M. BOUGUEREAU, a graceful floating figure in a somewhat vaporous manner, well known through photographs; and a clever portrait of a child in a pink dress, seated in a red wooden chair, *L'Enfant Rose*, by M. AUBLET. There is a curious picture by M. SOLOMON SOLOMON, *Ruth and Naomi*, hung high in the eighth gallery, which aims at certain effects of luminous pallor of tone and dreamy sentiment in accord with the more sentimental section of the Impressionist painters. There is undoubtedly a certain power in this work, and we are glad to meet again with an artist who drew our attention first in the winter oil exhibition at the Institute gallery, by a striking picture of an Eastern mother with a sick boy stretched naked across her knees. The woman held in her hand a bird, while drapery and flesh tones were all pale, yet brilliant, in the white glare and opal shadows of tropical light.

The water-colour drawings at the Academy are unusually good this year, possibly in prospect of the more honourable treatment which this branch of art is to receive in the new rooms now in course of construction. Of black-and-white work the same praise cannot be given; the etchings are disappointing, in spite of some good plates from Messrs. STRONG, MENPES, WYLLIE, AXIL HAIG, &c., and of cartoon designs for decorative purpose there is nothing worth mention.

In the sculpture gallery there is certainly not the usual hopeless array of mediocre work in portrait busts, choking out other and more individual efforts, and there are one or two pieces of real energy and knowledge. The chief place still belongs to the heroic rustic of Mr. HAMO THORNECROFT, A., on which we commented in studio notes. The figure tells exceedingly well in the more trying position at the Academy, and by its manly and well understood modelling and definite conception, contrasts favourably with the feeble work around. Some stir has been made about the promise of a young sculptor, Mr. ALFRED GILBERT, whose bronze head of an Arab we noted last year with interest. *A Study of the head of an old man in bronze* is a piece of close and careful manipulation, after the style of certain Roman busts—the well-known *Julius Cæsar* for instance; the small bronze figure of *Icarus*, balancing himself with the artificial pinions fastened on his arms, stretched down in line with the torso, is a clever design, with a certain fire and decision about it that remind one of the Italian MONTEVERDE. A strong point in Mr. GILBERT's claim to notice is the courage of his tooling. Mr. LAWSON's gladiator, *Ave, Cæsar*, halts, as usual with his work, on the edge of success. Mr. BIRCH, A., exhibits *Lady Godiva*, standing beside her horse before the celebrated ride—an enormous group, of which its size is the most noticeable feature, except we include the ill-studied proportions of the horse and lack of charm in the general lines of composition. Mr. WOOLNER, R.A., sends a graceful high relief of a girl, *The Water Lily*; Mr. CALDER MARSHALL, R.A., a fainting *Psyche*, a very material version in the nude of that Greek type of virgin passion. Mr. POYNTER, R.A., comes out in a new *métier* with portrait medallions in low relief, not much to be commended. A chief place is awarded in the central hall to Mr. MULLIN's group of Jacob and Esau, *Bless me, even me also, O my father*. There is a certain vigour here, but a singular want of dignity and of beauty of line; it is, in fact, clumsy though well-intentioned work. In small figures in the round, Mr. ARMSTEAD's *Egypt*, and *The Light of Asia*, by SUSAN CANTON, should be noted. Mr. SIMONDS exhibits the model, studied at the Zoological



Gardens from the life, of his lion for the colossal memorial monument at Reading to soldiers who fell in the Afghan campaign of 1879-80, a conscientious piece of work, treated with large purpose. In the way of animal sculpture, of less ambitious scale, nothing can beat Mr. TROOD's terra-cotta dogs; "*Chummy*" is perfect in its way. The bust portraits most conspicuous for good or for characteristic treatment and for interesting subject are—*Lord Wolseley* and *Mr. Herbert Spencer*, treated in the pugnacious manner of Mr. BOEHM, R.A.; Mr. THORNECROFT's *Samuel Taylor Coleridge*, for Westminster Abbey; *Longfellow*, the model for Mr. BROCK's bust in the Abbey, an heroic head, with flowing locks like the antique Jupiter; *The Late Dr. Pusey*, by GEORGE RICHMOND, R.A., a refined study in the round by the veteran painter; *J. C. Galton, Esq.*, a terra-cotta of a striking physiognomy, by CONRAD DRESSLER; and Mr. S. FRY's bust of *Norman Shaw, R.A.* Finally, we must not omit to note the three large reliefs by Academy students—Messrs. FRAMPTON, PEGRAM, and BATES—in recent competition of the given subject, *Socrates Teaching the People in the Agora*. A considerable similarity haunts the compositions, which are all praiseworthy efforts to master the difficulty of treating many figures on different planes with just relative relief and concentration of design. That Mr. BATES in these important matters is nearest the mark there can be little doubt, as that he has also transmuted the model with most freshness into the Classic type.

#### FRENCH PICTURES AT THE DUDLEY GALLERY.

A SMALL exhibition of unusual interest is opened at the Dudley Gallery, consisting of some sixty pictures of the French school, and a few pieces of minor sculpture. As was the case with the similar collection last year in the same place, the examples gathered are purposely representative of the rather ultra phases of French art which raise curiosity and controversy. That the examples are favourably representative cannot certainly in every case be affirmed. M. ROLL, for instance, was more characteristically, if not so pleasantly, seen in certain *farouche* studies of labourers and grimy children of the forge and the mine than in the large and not remarkable landscape, *The Grassy Path*, of this season, or the coarsely, if powerfully, painted study of a lady, life size, preparing to disrobe on *Return from the Ball*, and presenting the unalluring contours of her bared back to the spectator by the light of dawn, which is seen in reflection of a mirror, grey over the roofs of Paris. Such work as this is simply repulsive literalism, while the repulsive power of that other phase shown at its fullest in the celebrated picture of *A Strike*, has at all events a noble side and artistic purpose.

Literalism in another class of subject, but no less avowed, is displayed in the large canvas, *The First Communion at L'Eglise de la Trinité*, by M. H. GERVEX. This is an "impression" on a very large scale, and does, in fact, with clever management of perspective, present as much as, according to the formula, one would see of such a scene by winking one's eyes at it! That is a swift sensation of the apse of a cold grey church, a golden high altar before which a row of girls in white kneel confusedly together, steps down which three maidens demurely come, and a flutter of gay Parisian ladies and men looking over the stair rail. More than this one does not see, winking or meditative, for it is the most superficial aspect which the painter presents, largely drawn and painted with so broad and scenic a touch, that the little gallery in Piccadilly is all too narrow for a fair view of the picture. Now this kind of spade work is wholly deliberate, and does undoubtedly attain its end. At a given distance the scene has a startling actuality, and is right in relations of tone, colour, &c. But it is entirely without charm or nobility. That M. GERVEX can paint, and that delightfully, is evinced in the little portrait of a fair fragile child in a dark purple bonnet and dress, with touch of pale blue, entitled *Chilly*. Nothing could be more tender and close than the modelling; the drawing of the nervous mouth and eyes ready for tears is exquisite. *The First Arrival, Café des Ambassadeurs*, uses the incident of a lady in Parisian summer toilette, sitting at a window table in the upper floor of a garden restaurant, waiting for her companion, to display much cleverness in the management of cross lights, warm twilight into which the silver of the risen moon falls,

and the glow of artificial warmth from lamps without and within.

The interest of three studies on the racecourse, *During the Race, In the Tribune*, and *Around the Stove*, by M. DE NITTIS, centres chiefly in the artist's extraordinary skill in the use of pastel. With a limited range of colours and the dry, soft surface produced by the prepared chalk, he achieves a deep and solid quality of tone that is amazing. A clever draughtsman to boot, as evinced in the chic pose of the figures and in the perspective of the balcony and racecourse far below in the "*Tribune*" picture, and observant of social manners, M. DE NITTIS provokes one into interest over his realism of frivolous people and ordinary aspects of things.

M. LEROLLE has a more æsthetic aim. He seeks to move by the sentiment of a scene in which nature and man are at one. His pastorals have a largeness, not only of mere scale, but of style. *The Flight into Egypt*, which represents the Holy Family halting beneath the fir-trees of a forest plateau more like Fontainebleau than anything Egyptian, has sentiment, however, which is chiefly gained by the expedient of painting large golden aureoles round the heads of MARY, the BABE, and St. JOSEPH, and thus bringing these figures, which are otherwise quite subservient in the tranquil landscape, into mystic importance. This is not a good example of the artist. M. JOURDAIN, who has truth and *finesse* when he paints luminous little landscapes like *The Road to Quesnoy*, betrays a limited amount of the first, and of the second quality none, when he depicts a somewhat substantial *Dame aux Camellias* recumbent on a sofa, surrounded by birthday tokens of *The Favourite Flower*. The dainty landscape *genre* of M. CHARNAY looks almost out of place among its assailing neighbours. The artist's manner is a little too pretty, but of delicate microscopic detail and playful touch that has no feebleness about it; the result is delightful. Quite another manner, and again of kin to the *Impressionistes*, is that of M. MONTENARD. This artist delights in the white light and amethyst shadows of southern lands. He sees, and therefore draws, by his colour sense; it is not line, but tone, that attracts him—or, if one may put it so, light falling on mass and revealing itself by colour. Thus we have no hard outlines, but brilliant atmospheric effect and colour of radiant harmony. The blue skies palpitate, the land burns, the olive trees are a soft blur of grey-greens and pale stems. It is by laying on the pigment in large touch beside touch that some of the effect is gained. Among English artists Mr. A. STOKES has successfully studied the method, and achieves a brilliance almost equal.

Lastly, we must welcome the admirable portrait of *M. Victor Hugo* by M. BONNAT, lent by the poet himself—a piece of strong and thorough workmanship. The head is pronounced with decision and actuality; the hands, the figure are *en rapport*. This may not be ideal portraiture, but it is wholesome and good art.

#### NOTES FROM PARIS.

IN one of the Notes from Paris which were published a fortnight ago it was said that there never was a year when the selection of the works for the highest honours of the Salon presented more difficulties than 1884. The result of the voting corresponds with that statement to the letter, for it has been found impracticable to obtain a sufficient number of votes to insure the gold medal for any one work in painting, sculpture or architecture. A person who was acquainted with the opinions of French artists could have anticipated that result equally well with the writer. The Salon is generally described as an average exhibition, and average exhibitions are the terror of judges. M. Bouguereau's *La Jeunesse de Bacchus* received the largest number of the votes. The picture has been long in hand, and the writer saw it on the easel two years ago. So much was said about the picture from time to time that the public at last expected too much. Its fame reached England, and an effort was made before the work was completed to secure the painting for exhibition in Bond Street. We doubt if it would have attracted crowds. The jury in painting have been unable to award any first-class medals, but the twelve second-class medals have been voted to MM. De Lalaing, Schommer, Auguin, De Thoren, Kreyder, Bonnefoy, Delahaye, Damoye, Kroyer, Barillot, Escalier, and Durst. The first-class medals in sculpture go to MM. Levillain, Steiner, and Roland. In architecture the winners of first-class medals are M. Albert Ballu, who is represented in the Salon by views of his restoration of the tower of



Solidor, Saint-Servan, and of a mosque in Algiers; and M. Gaspard André, who exhibits ten drawings of a church at Lyons. The second medals in architecture have been awarded to MM. Girette (Casino at Hyères), Nénot, Chancel (design for a theatre), Girault (drawing of the Scaligers tomb at Verona), and Gagey (restoration of Château de Bourbon-l'Archambault). Third-class medals have been voted to MM. Yvon, Espouy, Bernard, Ruprich Robert, and Schay.

The opening of the Meissonier Exhibition on the 23rd inst. may be well described as one of the important events of the season. A more remarkable gathering of notabilities is of late days rarely seen in Paris. In one part of the room the Duc de Nemours might be heard commenting on the picture of *Napoleon III. at Solferino*, which had been lent from the Luxembourg; in another a dozen or more of the French nobility had collected around the artist to congratulate; the critic on one picture was a favourite comedian; while others were described to admiring friends by a famous author. Very few painters can sustain the test of bringing their works together, and in our time no painter has succeeded so well as M. Meissonier. Objections have been raised against the subjects of his pictures. They are said to show little invention, to be photographs in oils, to be repetitions of one another, and so on. In other words, people, instead of being grateful for the existence of so able a man, wish that M. Meissonier had been somebody else. This perpetual comparison of writers and artists with men of a different class is one of the impediments to progress in art and literature. It is as absurd to compare M. Meissonier with, say Eugène Delacroix or Ingres, as to compare a rose and a lily. There are many kinds of art, and in that represented by M. Meissonier, who has surpassed him? Certainly none of the Dutchmen. There is one test which may be well suggested in these columns. What artist has painted architecture with the accuracy of M. Meissonier? It matters little whether it is an arcade in Italian Gothic, or the Tuileries ruins, the interior of a library, or the stable of an inn—all the parts are put on canvas in a way which shows that the artist took a pleasure in architectural details. In other things the same accuracy is visible, and whatever is put down by M. Meissonier may be accepted as trustworthy. He has demonstrated the possibility of combining realism with art, and thus exemplifies one of the aims of his generation. France may well be proud of the man whose work for half a century is now so well represented in M. Petit's gallery.

English visitors to Paris during the autumn have a treat before them. There is to be an exhibition of French terra-cotta, pottery, and glass in the Champs Elysées, on a scale which is without precedent. In fact, everything that is derivable from the soil of the earth, whether a large statue in terra-cotta or a delicate liqueur glass, a service from Sèvres or a stained-glass window, will be represented. One section will be retrospective, and the other will exemplify what French fingers have accomplished of late years. Amateurs have cheerfully responded to the applications, and many of the most valued works belonging to the State will be lent. If the expectations of the committee are realised, as they bid fair to be, the exhibition will be one of the most interesting among the many which have been held since 1851.

"Macbeth," at the Porte St.-Martin Theatre, is fairly successful in attracting audiences, but as yet there is no difficulty in finding a place in that dingy house. It has been said that the tragedy is not well played as a whole, but the statement is unfair to the management. A play of the kind is ill adapted to the methods of French actors, and it is creditable to find so many of the characters well filled. There is no ranting and no spectacular display. It was hardly to be expected that the "gods" could understand the scenes in which the witches appear; but the laughter that is heard in the upper regions of the house should not be taken as a proof of bad acting. In England it is generally considered more prudent to supplement Shakespeare's words with Locke's music, which is an admission that those scenes are not sufficiently impressive to the world in general. M. Richepin has transposed some of the scenes and omitted others, and it must be said that his version of the poetry is the prosiest of prose. There are nine tableaux. The second scene in the first act, in which the wounded sergeant appears, is omitted, and the act ends with the meeting between Macbeth and the king's messengers. On the curtain

rising for the second act, Lady Macbeth is seen seated reading the letter from her husband—a scene which in the original forms part of the first act. The third act is occupied with the murder of Duncan, the fourth with the banquet and appearance of Banquo's ghost. In the fifth we see the meeting between Macduff and Malcolm (the latter being represented by an actress) and the second interview between Macbeth and the witches, which in the original is supposed to take place at an earlier time. The sleep-walking scene forms an act, instead of part of an act. Finally, there is the attack on Macbeth and his death. If it is objected that Shakespeare has been metamorphosed, and is recognisable with difficulty, M. Richepin can reply that on the English stage the poet's text is not followed with fidelity. The scene between the assassins and Macduff's wife and child is always omitted, and generally that scene in which the porter appears. The latter, it may be said, is represented at the Porte St.-Martin, and gives a great deal of amusement to the galleries.

The skill of M. Marais, who acts Macbeth, and the manly and pathetic interpretation of Macduff by M. Volny, deserve the recognition that is given by the audience at the Porte St.-Martin. But it is natural that in Paris the main interest in the tragedy is Madame Sarah Bernhardt's interpretation of Lady Macbeth. The character has been well studied by the actress, and her reading of it is marked by unity and completeness. After reading the letter, which is done deliberately, and during the temptation of Macbeth, we see a woman who, carried away by ambition, has undertaken something of which she cannot see all the issues. She is, as it were, for the occasion a human tigress. When the murder is discovered there is some hypocrisy in her terror, and Madame Bernhardt follows Coleridge in giving emphasis to the exclamation, "What! in our house!" At the banquet scene we see the woman in two aspects. She is curt and authoritative in controlling the guests, and sways them by vigour of will as much as by words, while the aside speeches to Macbeth are whispered with the sympathy and tenderness of which Madame Bernhardt alone is mistress. We can realise that the curse has fallen on her too, although, woman like, she has suppressed her sufferings. The sleep-walking is entirely different from English usage. The queen enters not with slow steps and eyes fixed on the middle of the dress circle, but rather quickly and excitedly, and without a thought of the statuesque. After a few of the sentences are spoken, we see that the recollection of the event overpowers her. She seems to discern the stain of blood upon the floor, and her involuntary scream startles the audience. Then she falls into a chair, and by turns we have realised those marvellous transformations of character which the poet in a few sentences describes. One moment sad, as she thinks of the dead wife of Macduff, then fiercely urgent to Macbeth, then despairing of forgiveness, and finally the fatalist, who knows that what is done cannot be undone. Madame Bernhardt presents so many phases of emotion and suffering, and with such variety of expression, that her sleep-walking scene deserves to be compared with that wonderful romance, so full of defiance and despair, which Tartini once heard the devil play on a fiddle. It is not surprising that there are repeated calls for the actress after this scene. Madame Bernhardt is the central figure of the tragedy, and the curtain might well fall when the cry is heard which announces her death.

On two nights Racine's tragedy, "Bérénice," has been played at the Odéon, and it would be difficult to find a more remarkable contrast to "Macbeth." While one glows with passion, the other is as cold as an iceberg. Racine could not comprehend such emotion as is seen when Macduff pulls his bonnet fiercely over his brow on hearing of the murder of his wife and children. The characters in "Bérénice" stalk on and off the stage, and utter lofty sentiments that recall the declamatory exhibitions of one's school days. It is no doubt very grand, and it is certainly serious; but with all their reverence for their Classics the Parisians have allowed the tragedy to remain for sixty years unacted, and, after the two nights' experience, it is possible that "Bérénice" may remain in retirement for a similar period. How many revolutions, artistic, literary, and political, have been witnessed since it was played in the early part of the century, and how many will be witnessed before the next revival! As the performance is not likely to have been witnessed by Englishmen, a few notes respecting it may be recorded. There are five acts, but the curtain did not



fall until the close of the tragedy, and the only indication of the end of an act was the absence of the actors for a second or two. The action—if such a word can be used—takes place in a cabinet, which characteristically is described as situated between the *appartement* of the Emperor Titus and that of Bérénice, Queen of Palestine; there was consequently only one scene, which was a pleasing room with Ionic columns. The dresses of the actors were inexpensive, but appropriate. It was worth a journey to the Odéon to hear the verses of Racine as they were there spoken; but it would have answered quite as well if the kings and queens and their confidants had been puppets and the speakers invisible. The dramatist thought only of building up lofty rhymes, and he attained that end. In the seventeenth century it was not supposed to be essential that the drama should be a mirror in which nature was reflected.

### AGNOSTICISM IN ART.\*

THE question that was long ago asked by the jesting Pilate is constantly arising in all branches of art, and rarely is it more difficult to give a satisfactory reply than when the question relates to the authenticity of paintings. So many of the great pictures of Europe have been ascribed to men of less eminence than the reputed authors, and the evidence in each case has been so puzzling, that even honest folks who take things on trust are sometimes compelled to ask, with the Roman Governor, What is truth? At the present time the connoisseurs are at loggerheads in Paris about works by Raphael and Corot, and when we find that it is not easy to determine the qualities which belong to a picture by a man who died a few years ago, we may well hesitate before deciding on the genuineness of a canvas which at least is older than the oldest living expert. The *Apollo and Marsyas* which was lately purchased by the French Government from Mr. Morris Moore, as a work by Raphael, is likely to give rise to as much difference of opinion in Paris as it once did in London. After a time the wrangling of experts will be suspended, some years will pass, and it will be renewed; but unless new discoveries can be made, the question whether Raphael worked on the canvas will be as far as ever from a settlement. There are few of the great pictures claiming to have come down from the sixteenth century in the public galleries of Europe which do not also offer opportunities to the sceptic, for it rarely happens that the history of one of those pictures can be traced from the time it left the painter's studio. There is generally some interval on which no light can be thrown, and it is open to everybody to exercise their invention about what was then done. For example, we find works by Giorgione in the public galleries of London, Paris, Vienna, Madrid, and also in private collections, in addition to those which still remain in Italy; yet there is only one work of his, the altar-piece at Castel Franco, of which the authenticity is established by documentary evidence. When this happens in the case of a man like Giorgione, who produced but few works, what is to be said of painters who were the heads of ateliers, and whose works were imitated with or without permission by assistants and others?

The appearance of a critic who is without implicit faith in the statements in catalogues may not be novel, still we may anticipate that the remarks of Signor Morelli will excite a good deal of fluttering among curators and the cognoscenti. There have been sceptics, but it is a long time since one stood forth with apparently such good ground for his doubts. Signor Morelli is apparently, like many another Italian, rather difficult to move, but dangerous while they are active. He has studied the pictures of his countrymen line by line, as if the smallest detail were worth the attention of a patriot. The study seems to have been undertaken without a thought of book-making, and we may assume that Signor Morelli has been forced into authorship by the misstatements which have been published in official catalogues and in books on the history of Italian painting. Seeing in Germany unworthy works associated with the names of great Italians, and injustice done by sacrificing certain artists in order to uphold the reputation of galleries, it was but natural that a man possessed of Signor Morelli's knowledge should be moved, for the sake of fair play, to question the infallibility of tramontane connoisseurship. At the same time, we are made to feel that the duty was not inviting, and is therefore got through as quickly as possible.

While admitting that a foreigner can see some things better than a native, Signor Morelli maintains that an Italian is best fitted to explain Italian art. It is in art rather than in literature that the nature of the people finds truest expression, and an Italian speaking on the subject is therefore in a different position to a stranger. This is true of the art of all countries, whether poetry, painting, or music, for a native is able to describe the art, as it were, from within, and his sympathy gives him insight.

\* *Italian Masters in German Galleries: A Critical Essay on the Italian Pictures in the Galleries of Munich, Dresden, Berlin.* By Giovanni Morelli, Member of the Italian Senate. Translated from the German. (George Bell & Sons.)

Dryden says that "the pencil speaks the tongue of every land," but as in all languages there are idioms in expression and niceties in pronunciation which are almost unattainable for a foreigner, so in art there are local touches in form and colour, in character and incident, which strangers may not observe or appreciate. If, therefore, we find Signor Morelli doubting the genuineness of a picture because he remains unmoved when he gazes upon it, we are not to conclude that he is too hasty in his conclusions, or that the feelings are a less safe guide than the intellect. An artist cannot entirely emancipate himself from his surroundings, and however imaginative or removed from everyday life his subject may be, he is certain to do something which will suggest the time or place of production, or the kind of people from whom he derived his idea of life. But Signor Morelli does not rely altogether on his impression; whenever it is necessary he has recourse to documentary evidence, and investigates the particulars with a lawyer's zest, and as if the point in dispute were the title to landed property.

It would take more space than we can afford to notice all the pictures which are scrutinised by Signor Morelli. A remarkable case is the *Reclining Magdalen*, by Correggio, sometimes called the *Egeria*, in the Dresden Gallery. This has been deemed to be one of the best executed and best preserved of the artist's works. Even a good copy like that belonging to Earl Dudley is accepted as a treasure. Signor Morelli denies that this cabinet work could have been produced by Correggio, and for several reasons. In the first place, he says it is painted on copper, and, notwithstanding all that is alleged to the contrary, no Italian painter employed that material before the close of the sixteenth century. Then the background represents some northern scene, and the foliage is not suggestive of anything that grows in Italy. The ultramarine robe over which so many amateurs have become eloquent is said to be too glaring and dazzling for Correggio. Objections are also raised against the affected form of the fingers, the long nails, with all the light thrown on the edges, contrary to the Italian practice, and the minute creation of the foreground. The picture is said to have been painted by Correggio in the year 1533, but it was somehow unknown until the beginning of the eighteenth century. There seems to be no doubt that Correggio did paint a penitent *Magdalen*, but what became of it Signor Morelli has not been able to discover. The *Magdalen* in the Uffizi Gallery, he says, is no more Correggio's than the Dresden picture. The latter he believes to be "a copy which may have been executed towards the end of the seventeenth century by some Netherland artist not unconnected with Adrian van der Werff." Signor Morelli is a great admirer of Correggio, and the following passage (for which the author apologises as savouring of professorial style) suggests some of the differences and resemblances between him and Michel Angelo:—

Michel Angelo was sprung from a patrician family of Florence, and had grown up in a rich and splendid, but politically distracted city, at a time when moral character was on the decline. With his lofty, proud, and independent nature, he soon became disgusted with the want of principle and the idle pleasure hunting of his contemporaries. This disposition of mind we find already expressed in his celebrated *David*; it increased with years and especially after the fall of the republic at Florence, and found its strongest expression in his well-known verses on the statue of *Night*. Ill at ease, he at an early age withdrew from the world to live entirely to his art. He was at bottom, like Correggio, of a simple and pure nature.

Antonio Allegri, on the contrary, was the son of a modest, peaceful burgher family, and beyond love of his art, his mind can scarcely have been touched by any deep or enduring passion. If Michel Angelo pursued his calling, a solitary amid the noise and bustle and passions of a world-city like Rome, Correggio spent his days a solitary in a small provincial town, among Benedictine monks. As Correggio was endowed by nature to utter "sweetness of soul," alike in sport and sorrow, in the intoxication of sensuous joy as in the rapture of divine love, Michel Angelo's heroic temper led him mainly to body forth earnestness, dignity, and strength, the noble pride of a free nature, the bitter scorn of all that is base, unprincipled, and vain—in a word, all the manly attributes and passions of the soul—in their strongest utterances. Out of his titanic figures, the emancipated mind of man, as if in full consciousness of its God-given strength, looks down with true Olympian pride on the broken chains that bound humanity. It is certainly remarkable that the chief representatives of these two moods of mind, Correggio and Michel Angelo, should have flourished at the same time. Michel Angelo's whole cast of mind belongs rather to the age of Dante, yet, as a phenomenon, and because he worked chiefly for popes, and in the two intellectual capitals of Italy as it then was, Rome and Florence, he had a far more direct and powerful influence on his contemporaries than Correggio. All minds that came into contact with his were subjugated by him, or attracted out of their natural orbits; and thus, through him, the decline of art became still more precipitate than it would have been without him. Correggio operated more indirectly through the Carracci, so that his unhappy imitators do not muster very strong till the seventeenth century.

Between the powerful individuality of Michel Angelo and of Correggio, the divine Raphael stands midway, as the most measured, most calm, most perfect of artists, the only one who in this respect was an equal of the Greeks. Happy the land that had such men to offer to the world!

The best example of Correggio at Dresden is, according to Signor Morelli, the *Madonna with St. Francis*, which is said to



possess as pronounced an individuality as the *David* of Michel Angelo. The *Notte* and other works have been so shamefully used and so painted over, the Signor marvels that anyone can go into raptures over the chiaro-oscuro they are supposed to display. He is no less sceptical about the Giorgiones in the Dresden Gallery. The *Jacob and Rachel* is said to be manifestly by Palma, some share being assigned to Bonifazio. The *Adoration of the Shepherds* is credited to Bonifazio the Younger. The allegorical picture is said to be a copy of an original Giorgione. On the other hand, Signor Morelli says that the Dresden Gallery does possess the *Sleeping Venus* by Giorgione, long supposed to have been lost, although the authorities are not aware of their treasure. "When I consider," says the Signor, "that the eyes of but very few connoisseurs have been attracted by the wondrous light that shines from this noblest of all Venuses in the world, even through the veil with which the restorer has covered it, a sore feeling comes over me, a deep discouragement, and I cannot help saying to myself, What avails our vaunted culture? What is the good of hundreds of books on æsthetics and art, of public lectures, of our yearly art exhibitions, if, in default of express directions, we can pass unmoved by one of the most glorious and perfect creations that art of all times has ever brought forth?" If the canvas were properly cleaned the picture would become, it is said, one of the most precious gems in the art, for Giorgione's type of goddess is more noble than Titian's, Correggio's, or any other painter. The picture, it may be remarked, has been ascribed to Titian. Messrs. Crowe & Cavalcaselle believe that it is a copy of his *Venus* at Darmstadt, while Signor Morelli says that the Darmstadt *Venus* "is nothing but a free, and more than free, copy of Giorgione's *Venus* at Dresden, and that by some feeble German artist of the eighteenth century." When his guides are so much at variance, what is a student to believe?

Signor Morelli examines all the Italian pictures in the three galleries of Munich, Dresden, and Berlin in this manner, and it must be said that when he is most opposed to stereotyped opinions, he never speaks rashly, and always makes out a good case in support of his own theory. Tourists to the German galleries will find his volume to be an invaluable companion. So many guide books are inspired by the cicerone spirit, and print statements without giving a thought to evidence, there is a relief in meeting with a book that suggests to us the advantage of thinking more of the execution of a picture than of the painter's name which has been inscribed on the frame.

## ART SCHOOLS, GALLERIES, AND MUSEUMS.

THE following is extracted from the report of the Commissioners on Technical Education just issued:—

The question of providing museums of art and industrial objects for provincial towns is still almost in its infancy in this country; and though Birmingham, Liverpool, Nottingham, and recently Manchester, have established promising art galleries, and in other large towns also some interesting collections exist, there is as yet no provision of this sort at all comparable with the amply furnished museums and galleries possessed by many provincial towns on the Continent, especially in France.

It cannot be disputed that to the influence of these collections, and to the direct bearing they have on art and industrial training, is due much of that abundance of art resource which is so advantageous to many French industries and manufactures. Though we can scarcely hope to obtain in our provincial towns within an early date such collections of rare pictures as have been acquired in some foreign towns through the influence of old traditions and special causes of distribution, much is possible for us, in the direction both of augmenting our present resources and of bringing them to bear with greater effect on our art manufactures, and in vastly increasing the artistic power of our skilled artisans.

In the case of France, which stands at the head of artistically-educated countries, the provincial museums have been largely assisted by the State, both by money and by contributions of pictures and other objects. The surplus stores of the Louvre are freely given to such galleries, and the supply of good copies and casts for the art schools is administered with a lavish hand. It would, however, be erroneous to suppose that foreign provincial galleries lean entirely on the support of the central Government. The magnificent gifts and bequests of private individuals to the galleries of Limoges, Montpellier, Dijon, Nancy, Lille, and other towns, bear witness to the fact that local effort and enterprise are by no means exclusively British virtues, and they prove also the high value which the presence of a local gallery has in stimulating the taste and attracting the munificence of the inhabitants.

At Limoges the splendid collection of enamels and pottery, nearly all due to private gifts, has a direct and most valuable bearing on the local porcelain industry. The art school is under the same roof as the museum, and at this school some 1,200 students, chiefly of the artisan class, receive gratuitously a sound technical instruction, not only in the principles of decorative art, but also in the direct and practical application of art to the chief manufactures of the town. The same may be said in some degree

of Tours, where the museum and picture gallery are in direct connection with the art school, and the teaching is adjusted to help skilled industry as well as to give a pure art training. The public art schools of Lyons also, while holding a high position as centres of pure art teaching, do very much to serve the local designing; and the collection of artistic fabrics, and of drawings and designs connected with the silk trade, forcibly illustrates the value of local effort and management in advancing the interest of special artistic industries. The porcelain painting of Nantes and the glass painting of Angers owe very much to the direct teaching of their art schools, and to the admirable illustrative collections they possess.

It may be broadly asserted that every French provincial capital possesses not only an efficient school of art, but a picture gallery and museum, either of industrial or antiquarian interest, and also a good library. Nor is it found that these influences tend mainly to the creation of picture-painters. That department of art is not specially encouraged, the main function and utility of their art-teaching being in its application to local trades and industries. As the State joins with the local municipal body both in providing the budget and in supplying the art collections for provincial galleries and art schools in France, so the control and management of these institutions are of the same joint character. The State appoints certain leading officials and directors, while all matters of detail are conducted generally by the mayor and a small committee of management. It seems a very useful and even high view of the duties of a municipality that its resources and influence should be thus applied to the advancement of art; and so much is this obligation recognised in France that the museum and gallery are now well-established provincial institutions. Some are of high value; others, perhaps, are of less worth, but all tend to an elevation of taste and industrial skill. Special notice is due to the abundance and excellence of the casts and models in nearly all the French art schools and academies. These are freely and gratuitously supplied by the State, and no request for them is ever refused by the central authorities. The prominence given to modelling in all the French State-supported schools is a feature of marked value, and contrasts forcibly with the meagre attention bestowed on that essential branch of art teaching in our own schools. Though the provincial art training of France is mainly directed to industrial ends, very ample provision is made in all the chief schools for the transference of promising pupils to complete their studies at the *Ecole des Beaux-Arts* in Paris, at the public expense.

In many of the principal towns of Germany we found also excellent and well-arranged art museums, some of them occupying the same buildings as the schools of art. This was the case at Berlin, where, chiefly owing to the efforts of the Crown Princess of Germany, an admirable museum of works of art has been brought together, on the model of the Museum at South Kensington, its avowed prototype. This museum contains fine collections of pottery, porcelain, enamels, metal-works, textiles, wood carvings, and decorative art workmanship. It has been arranged with special reference to the use of the art students, but it is freely opened to the public for study and recreation.

At Vienna there is likewise a close and intimate connection between the school and the museum, and the admirable collections of ornamental art have been largely acquired with the view of aiding and supplementing the teaching of the professors in the art schools, which are conducted in the same building. The Museum of Industrial Art at Dresden is a model of the manner in which collections of art-objects may serve to illustrate and bear upon the instruction given in the schools. The collections occupy the ground floor of the building formerly occupied by the Polytechnic School, and the art school is carried on in the rooms above. Under the able direction of Professor Graff, the students make large use of the fine collections of textile fabrics, majolica, glass, furniture, and metal work; and in a special room in the museum has been brought together a most interesting display of modern furniture, leather work, glass, porcelain, metal work, textiles, and almost every description of art manufactures, by workers in Dresden and its vicinity, from designs by the students and masters of the school. This latter feature is one we did not notice elsewhere, but which appears to us to be well worthy of imitation. We should specially notice the library at this museum, which contains many thousands of designs for art workmanship, mounted on cards and arranged in boxes for facility of reference, each box consisting of some sixty or seventy sheets of designs for some special object, thus "chalices," "lace," "bookcovers," &c. This section of the library alone contains above 27,000 sheets of designs.

At the admirable Industrial Art Museum at Nuremberg, this plan of arranging designs was, we believe, originated. The collections at Nuremberg, though on a smaller scale than those at the more important towns we have already named, are very complete and are extremely well chosen. Some art teaching is carried on at this museum, though a completely equipped art school does not form part of the scheme. There is a class of bronze-workers and electrotypers, and excellent practical work is done. Copies are produced of the art objects in the museum, for distribution to other parts of Bavaria, and some desirable exchanges have been



made with other museums. As these foreign museums become more numerous, some larger and more extended system of international exchanges with England and the Continent than that already in operation may be introduced with advantage. The Museum of Industrial Art Workmanship at Munich is probably the most extensive on the Continent. The collection of textiles is very important, and though no school is, we believe, attached to the Royal Museum, every facility is given to art students to make large and free use of the collections. At Zurich, the Commissioners found at the Industrial Art School an excellent museum of ornamental art, collected for purposes of study. This museum has only been established for a few years, but it is already rich in metal-work and wood-carving.

In some of the smaller German towns, permanent collections of art workmanship are brought together in the Gewerbe Hallen, or Trade Halls. These are very frequent in Baden and Wurtemberg. Together with the best examples of modern artistic work, we found displays of art reproductions, collections of textiles, and frequently special retrospective collections relating to the chief industry of the district. In the Central Stelle at Stuttgart is an excellent museum somewhat of this character, and in numerous small towns of the Black Forest we found flourishing museums, largely aided by grants and loans from the Government collections at Carlsruhe.

It is certain that no Continental country can boast of such an admirable system of loan collections as that supplied by the Science and Art Department at South Kensington, and it would be well if even this supply, large as it now is, could be still further increased, and the collections allowed to remain for longer periods in the towns to which they are sent. As an example of what may under existing conditions be achieved in this country by means of local effort, we cannot do better than point to the splendid art gallery and museum at Liverpool, which is almost entirely due to the munificence of local benefactors. The building for the Derby Museum of Natural History, the bequest of the Earl of Derby, valued at 50,000*l.*, was erected by Sir W. Brown at a cost of 40,000*l.*, and the museum has been further enriched by the unique collection of historical art presented by Mr. Joseph Mayer, F.S.A. We are informed that the museum is visited by manufacturers and artisans from the Staffordshire Potteries, for the sake of the valuable collection of ceramic ware which it contains. Subsequently Sir A. B. Walker erected and presented the magnificent art gallery at a cost of nearly 40,000*l.* In the same group of buildings are the Free Library and the Lecture Hall. The cost of the entire block has been little short of a quarter of a million sterling.

The public Art Gallery of Manchester has quite recently been established under the powers of the Manchester Corporation Act, 1882, by which the Corporation became possessed of an old foundation, the Royal Manchester Institution, in the building of which the Art Gallery is now accommodated. The well-known "Book" collection of ancient textiles has been purchased by the Corporation as the commencement of an Industrial Art Museum, especially of service to designers engaged in the staple trades of the district. We are glad to observe that the Art Gallery and Industrial Museum are open on Sundays during the winter, between the hours of two and nine p.m., free to the public, and we learn that they have been visited by crowds of artizans and their families; the number of visitors on the four Sunday afternoons ending January 6, 1884, having been 10,308. Their conduct was without exception exemplary, great interest being shown by the visitors in the different works on view, particularly when the subject was thoroughly explained to them. Nor must we forget to mention in this connection the conversion of the castle at Nottingham into a public Museum and Art Gallery, likewise supported by the Corporation of that town, as well as the valuable Industrial Museum at Edinburgh, connected with the Science and Art Department.

Short of a complete reorganisation of the principles on which our national art institutions are administered, it would be difficult to suggest a plan by which the right of large provincial centres of industry to share the advantages of the national art treasures and Imperial support could be fully and practically recognised; but, even under our present disjointed administration, deficient, as it is, in Parliamentary responsibility, some more liberal provision might be made, both in money grants and in the permanent gift of surplus objects and reproductions, for the endowment of provincial museums and galleries. Such gifts, and the general character of the collections themselves, should have special relation to the trades and industries of the various localities; and an intimate connection should be established between the metropolis and provincial towns in all art matters.

The small degree in which our art schools, with few exceptions, are now contributing either to industrial or designing art, is only too well known, and a marked change in this respect is essential before our schools can hope to take rank with those of the Continent in direct commercial utility. And to this aim no more valuable accessory can be provided than that of museums well supplied with examples bearing on the trade or industry of the town or district, and placed, if possible, in the same building with, or in close proximity to, the school of art.

Municipal and other local authorities, as well as the ratepayers at large, should be induced by every means to acknowledge and

discharge the responsibilities they are under to the community in this respect; and by the expansion of their powers under the Free Libraries Act they should be enabled to make ample provision for the endowment, maintenance, and management of museums and galleries, fitted not only to supply the means of higher artistic study and elevating recreation, but to serve directly in the improvement and development of existing industries, and in the acquisition of new branches of trade and employment for the skilled workmen of our country.

## EDINBURGH ARCHITECTURAL ASSOCIATION.

THE last of the bi-weekly excursions of the members of this Association took place on Saturday. The conductor was Mr. Hippolyte J. Blanc, architect. The Forth Bridge works, Queensferry Friary, Barnbougle Castle, Dalmeny House, and Dalmeny Church were visited. Mr. Blanc stated that the Friary at Queensferry was built and endowed by Sir George Dundas of Dundas as early as 1332. It was built for Carmelite Friars, and dedicated to the Virgin Mary. All that now remains is a square tower with an eastern and southern wing. Used partly as an oil-store, regret was expressed at finding the place so neglected. At Barnbougle Castle Mr. Blanc explained that this ancient stronghold, built in 1414, was at one time the baronial mansion of the once powerful, but long extinct, family of the Moubrays. It passed into the possession of the Primrose family in 1662. To the present proprietor, the fifth Earl of Rosebery, they were indebted for the reconstruction of this interest landmark. Planted on a rock-built terrace, with a quaint stone railing surrounding it, the castle was in no wise remarkable except for its fanciful situation. The present edifice has been reared upon the original foundations. Dalmeny House, the seat of the Earl of Rosebery, was erected about the beginning of the present century by Archibald John Primrose, fourth Earl of Rosebery, and, designed by Mr. Wm. Wilkins, it expresses a phase of the English Perpendicular style as practised in England during the fifteenth century. A pleasant walk of half an hour brought the party to Dalmeny Church, which, it was mentioned, at one time belonged to the Abbey of Jedburgh. It is a singularly entire example of early work, and is to be regarded, said Mr. Blanc, as a peculiarly interesting example of a class of churches which, though comparatively numerous in the south-eastern districts of Scotland, are rarely met with but in a ruinous state. The whole details point to the Norman period. For richness of detail and completeness Dalmeny and Leuchars are peculiar, and of the former Hill Burton says it is one of the most truly venerable and interesting specimens of ecclesiastical architecture of which Scotland can boast.

## SOUTH KENSINGTON MUSEUM.

UNDER the designation of "The George Cruikshank Collection," the South Kensington Museum is about to receive an unrivalled series of the artist's works, ranging over a period of about seventy years. Selected copies, for the most part with the autograph signature of their author, of the engravings, etchings, and coloured caricatures by which the artist made himself known wherever English is spoken, during seventy years of industry, have been reserved or gathered for the purpose of this gift; and to the series have been added some of the most elaborate and interesting of the original water-colour drawings from which his etchings were executed. His widow, desiring that these works should form a lasting memorial of her husband, is about to present the whole collection, numbering upwards of three thousand works, to the South Kensington Museum. The museum is also about to receive an important addition to its collection of English porcelain, pottery, and Battersea enamels. Lady Charlotte Schreiber has presented to the museum the valuable series of specimens, amounting to some thousands, which she and the late Mr. Charles Schreiber had brought together after many years of careful and laborious collection in all parts of England and the Continent. All the best varieties of English china are represented in the collection; Bristol porcelain especially is better illustrated than ever before. Chelsea, Bow, Worcester, Derby, &c., are represented by rare and choice examples. The collection also contains numerous examples of such special and interesting developments of English pottery as the curious white salt glazed ware. To these Lady Schreiber has added her complete and curious collection of Battersea enamels, together with rare specimens of old English glass.

The Storm Overflow Sewer just completed at Deptford is the largest that has been constructed in the metropolis, and has taken about eighteen months to construct. It is 11 feet in height and 13½ feet in breadth. The entire sewer is laid in a bed of concrete, and is at its minimum thickness 1 foot 4½ inches. The total cost has been 34,000*l.*, and the ground covered is 3,350 feet.



## NOTES AND COMMENTS.

SIR EDMUND BECKETT has resigned his connection as Honorary Associate with the Royal Institute of British Architects, in a letter to the Secretary, in which he declares that the primary object of the Institute has become to advance, not architecture, but architects. The Council, in acknowledging the letter, express regret that Sir EDMUND "should so inadequately appreciate the aims and actions of the Institute." There are not a few who will congratulate the Institute upon the retirement of a gentleman who ought never to have been elected. No doubt it was thought that the reception in a friendly way of so pronounced an opponent would have the effect of making him something like a friend; but there were those at the time who shrewdly doubted the success of a policy so feeble and insincere. Sir EDMUND BECKETT has too long and too inveterately identified himself with the strange doctrine that architects are useless, to allow any chance of his becoming a supporter of their professional cause. When he now speaks as he does of "architecture not architects," we can only ask what practical meaning is to be attached to his words; in common parlance they have none, unless it be to suggest the obvious absurdity that architecture ought to be administered, not by those who understand it, but by those who do not. If he were to say *not architecture but surveyors*, we might have a word to say upon the subject.

THE Council of the Society of Arts desire to bring under the notice of English manufacturers the Exhibition of Art Industries which is being organised by the Central Union of Decorative Arts, Paris. This exhibition is the third of a series of technological exhibitions of art industries formed by the Union. That of 1880 was specially devoted to metal industries; that of 1882 to the industries connected with wood (furniture), textile fabrics, and paper. The forthcoming exhibition will be devoted to stone, wood (building), ceramics, and glass, and will be held in the Palais de l'Industrie, in the Champs Elysées, Paris, from August 1 to November 21, 1884. It will comprise a modern exhibition and a retrospective museum. The heads of the classification to be adopted in the exhibition are as follows:—Group I. Stone (section 1, natural stone; section 2, artificial stone; section 3, precious stones and gems; section 4, designs and models). Group II. Wood (section 1, natural woods; section 2, decoration and imitation of wood, lacquer, varnishes, &c.; section 3, designs and models). Group III. Pottery and glass (section 1, ceramics; section 2, glass; section 3, enamels; section 4, mosaics; section 5, designs and models; section 6, application of photography to decoration).

THE sixteenth annual report of the Surveyors' Institution has just been made by the Council, and the Council may be congratulated on the very satisfactory account of the state of the Society, and the work it has effected. The number of members is at present much larger than in any previous year, the total number, including students, being now 1,131. Since the introduction of examinations the student class has received a large increase of members. During the year, 87 candidates offered themselves in the various divisions—51 at the preliminary examination in January, and 36 at the professional examinations in April last. Of the former 30 earned a pass, and of the latter 23 are reported as passed. Much of the work of the candidates reached a satisfactory level of excellence. The work in the building section fell, as a whole, considerably short of the standard which it should reach, and in this section the largest percentage of failures occurred. Candidates in the building section are advised for the future to devote more attention to the principles of construction, and to the study of strains in iron and timber. In field work the levelling was in a few cases extremely good. The practical timber measuring and the forestry paper were remarkably well done by a large majority of the candidates, but the highest merit was perhaps reached in the subject of sanitary science.

AN exhibition is now open at the Tuileries which is worth a visit from architects, builders, and members of the City guilds, if any are in Paris. It consists entirely of drawings and models which have been made by carpenters' apprentices. France seems to be destined to fulfil the office of devising experiments in government and political economy for the benefit

of other nations, and this exhibition is part of an experiment in technical education undertaken by a society of working carpenters. The drawings may not be attractive to ordinary visitors to picture galleries, but there can be no question as to their importance. They show that a workman's society insists on students being well grounded in their knowledge of form and of details of construction. Problems in descriptive geometry are carefully worked out, and the applications of the science are shown in many varieties of winding staircases, groins, roofs, and domes. The drawings are not like those which a lithographer or a draughtsman could produce, and apparently the aim of the masters has been to secure that the pupils should understand all possible appearances of the thing represented, and therefore no thought has been given to artistic effect. The models are neatly made, and the exhibition is creditable to students and society. Another advantage in the exhibition is that an intelligent carpenter is always present to represent the society and to give information.

INDUSTRIAL art comes nearest to perfection when the human figure becomes an element in it; but to apply the figure properly is so difficult, it is not surprising that so many modes of decoration have been invented in which something else has been substituted. A work is now being published by MM. GOUPIL which is likely to do service to art by suggesting what can be done when the figure is made the principal element in decoration. M. CARRIER-BELLEUSE, the sculptor, who is the director of the Art Department at Sèvres, is the author of the work, which is entitled "*Application de la Figure humaine à la décoration et à l'ornementation industrielles*." It will consist of ten parts, containing about two hundred plates. All the plates are ready, and four of the parts have been issued. It is needless to say that M. CARRIER-BELLEUSE is the first authority in France on the subject of industrial art, and it cannot be forgotten that he was one of the pioneers in the English art revival, as about thirty years ago he was the art director at Messrs. MINTONS', and the late Sir HENRY COLE was indebted to him for advice when the Government art schools were established. M. CARRIER-BELLEUSE's figures are admirably suited for decoration. He avoids the massiveness and contortions which at one time were supposed to constitute high art. His figures are marked by grace, vivacity, and beauty of contour. The goddesses are light enough to rival CAMILLA in walking on grass without bending the blades. No less remarkable is the appropriateness of the figures to their position; and the plates form a collection of compositions of very great beauty. An effort should be made to secure the originals for England, and especially for some town in the Potteries. If they were added to the Wedgwood Institute it would be difficult to put a limit to their influence on English art.

ANOTHER English collection is to be sent to Paris for sale. In a week or two Lord DUNMORE's pictures will be sold in the Hôtel Drouot. They comprise works by RUBENS, PAUL POTTER, REMBRANDT, &c.

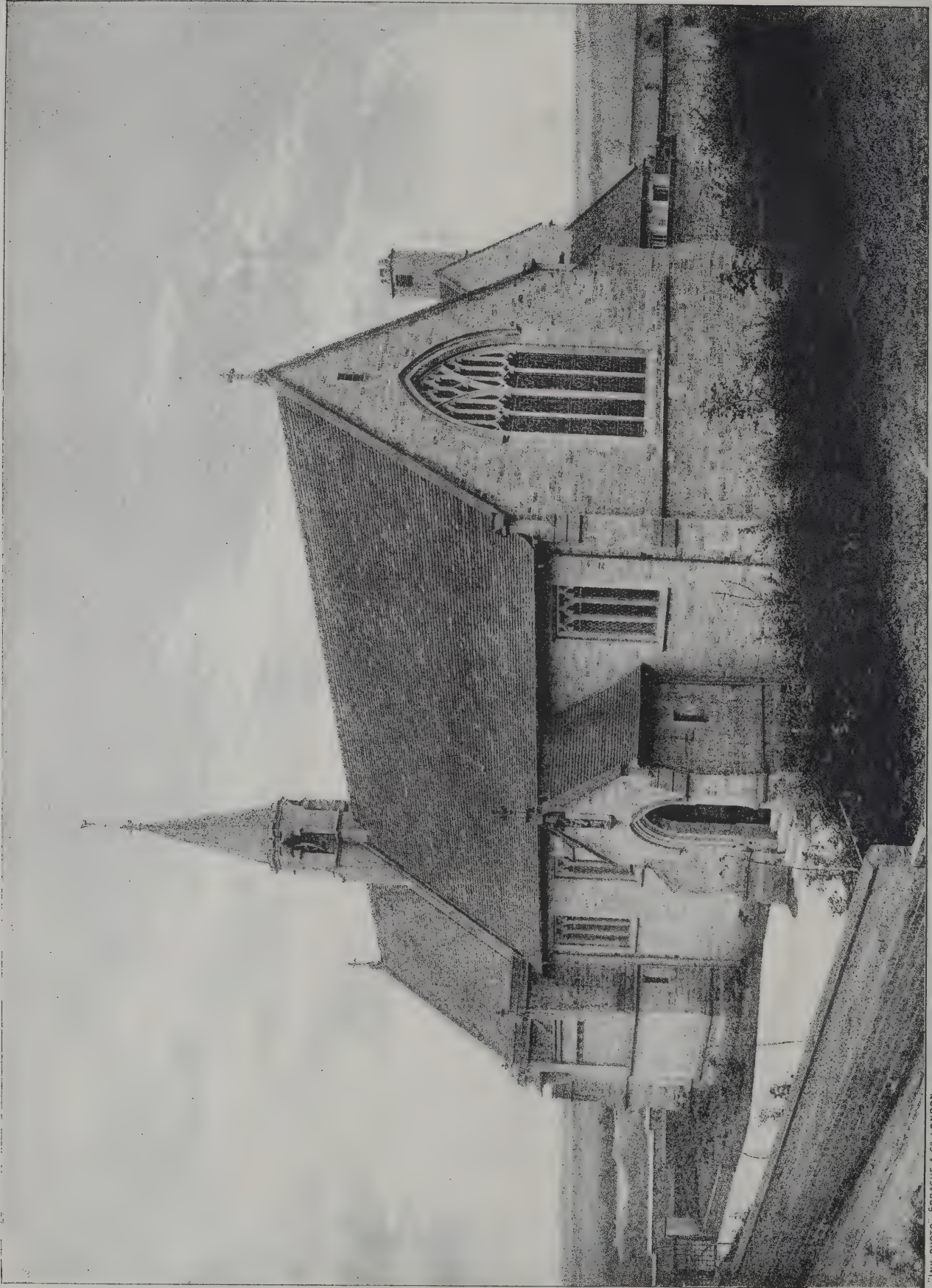
A FINE Arts and Industrial Exhibition, which was opened yesterday in Wolverhampton, has been got up in aid of funds to provide works of art for a handsome art gallery just presented to the town by an anonymous donor, at a cost of some 5,000*l*. The show of pictures in the gallery is probably one of the finest provincial displays collected together, and they have been lent from public and private collections all over the country. Approximately there are 800 pictures in the exhibition, and of these about 150 are water-colours. Many of the latter are very large, and choice works of TURNER, COX, DE WINT, NASH, MÜLLER, JAMES HOLLAND, and SYDNEY COOPER are included in the collection. Among the oils will be found splendid examples of RUBENS, SNYDER, LAWRENCE, J. B. PAYNE, CRESSWICK, J. WILSON, POYNTER, BONINGTON, FRIPP, AUMONIER, W. COLLINS, Sir JOHN GILBERT, H. DAWSON, LEADER, E. LONG, LASLETT, BIRD, and many other famous painters. RUBENS's charming picture, *The Holy City*, has been lent by Lord BRADFORD, and the Earl of WARWICK has contributed a magnificent VAN DYKE, *Gondomar, the Spanish Ambassador*, and another celebrated picture by RUBENS of his own daughter. The Earl of DARTMOUTH and the Earl of DUDLEY have sent several splendid SNYDERS.







The Architect, May 31<sup>st</sup> 1884.



"INK PHOTO." SPRAGUE & CO. LONDON

ST. JOSEPH'S CHURCH AND PRESBYTERY, WATH-UPON-DEARNE.  
M. E. HADFIELD & SON, ARCHITECTS.









SALA DEGLI ANGELI



Decorative Band



Decorative Band



Decorative Band



INTARSIA DOOR, SALA DEGLI ANGELI, DUCAL PALACE, URBINO.

DRAWN BY M. HAYES











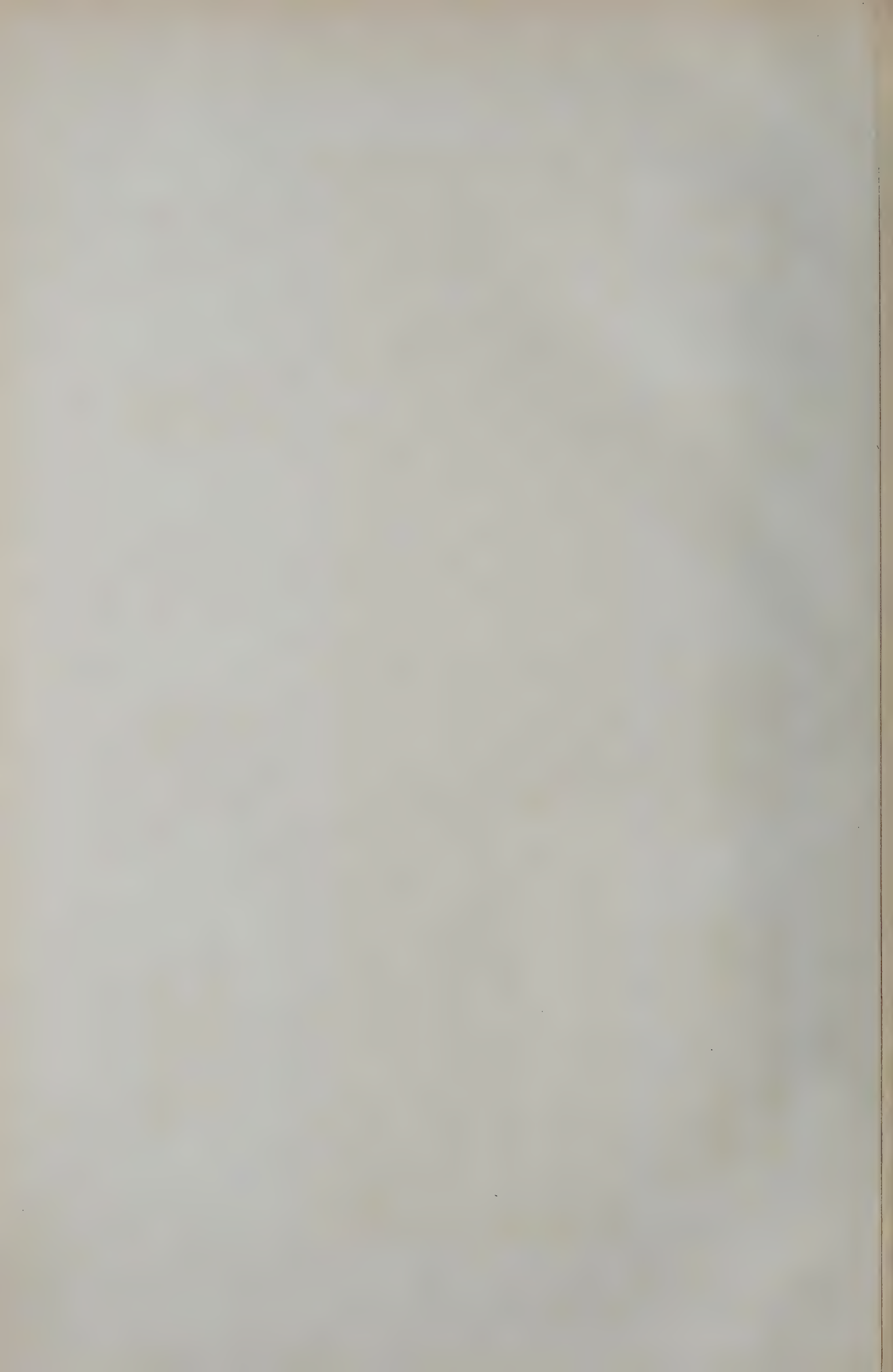
May 31<sup>st</sup> 1884.



SCHOOL OF ART, CHESTER.

ARCHITECT, CHESTER.









HALF SIDE OF DOOR, INTARSIA, DUCAL PALACE, URBINO.

DRAWN BY M. HAYES.









INK-PHOTO. SPRAGUE & CO. LONDON

BLOCHAIRN FREE CHURCH, GLASGOW.

MALCOLM STARK, JUN<sup>r</sup>, ARCHITECT.







## ILLUSTRATIONS.

NEW MUSEUMS AND SCHOOL OF ART, CHESTER.

THE view in this week's issue (taken from the original drawing in the Royal Academy) illustrates a building intended to accommodate the scientific societies of Chester, together with the Schools of Science and Art, with a view to centralise the various collections of antiquities, natural history specimens, and science subjects.

The joint committee have secured a very good site on the Grosvenor Road, the main entrance to the city from the Welsh side, partly by purchase, but chiefly by the gift of His Grace the Duke of WESTMINSTER, who has evinced the greatest interest in the undertaking from its commencement, heading the subscription list with a donation of 4,000*l*.

The accommodation has been distributed with the greatest care to suit the varied societies, each having separate floors allotted for their purpose. The ground floor is chiefly occupied by a large lecture-hall, available for all the societies in common; an archaeological museum, 60 feet by 30 feet; and an art gallery, 60 feet by 23 feet, with top light, suitable for a permanent picture gallery, and available for conversaziones; the remaining portion, principally committee-rooms and library, being occupied by the Archaeological Society.

From the entrance vestibule is a large staircase hall leading to the first floor, which is intended for the Science and Natural History Society, founded by the late CHARLES KINGSLEY, when Canon of Chester. The front portion of building contains class-rooms and library, whilst an ample laboratory is provided in the rear, together with a museum exactly similar to the one already mentioned, besides a smaller one adjoining.

The second floor contains a suite of rooms for the School of Art, consisting of male and female elementary rooms, modelling, antique, and painting-rooms, all of which are planned to obtain light and accommodation best suited to their purpose.

There are the usual retiring-rooms and lavatories; the basement contains ample storing space for packages and heavier specimens, and a keeper's house is planned at the east corner of the building.

It is intended that the floors be of fireproof construction, and the building warmed and ventilated by special systems of pipes. The external facing will be of terra-cotta and bricks, with tiled roofs, and the style adopted is considered suitable to the surrounding buildings, which are more Classic in character than the older portion of the city.

The plans have been prepared by Mr. THOS. M. LOCKWOOD, architect, of Chester, and the work will shortly be commenced, the subscription list at present amounting to 6,500*l*.

INTARSIA DOOR, DUCAL PALACE, URBINO.

THE illustration, like one lately published, has been taken from drawings by Mr. HAYES, an artist who was fortunate in carrying off one of the principal prizes given by the City Companies. Mr. HAYES resigned an appointment he held in order to devote himself to the study of decorative art in Italy, and he has brought back a most valuable collection of details, of which the plates published may be taken as samples.

ST. JOSEPH'S CHURCH, WATH-UPON-DEARNE, YORKSHIRE.

THIS church was completed and solemnly dedicated by the Bishop of LEEDS about four years ago. It was erected at the cost of Mrs. CADMAN, of Cross House, and Mr. and Mrs. BECKETT NICHOLSON, all of Wath-upon-Dearne, and stands on a picturesque site adjoining the high road from Wath to Mexbro. The presbytery is placed on the south side, with a direct communication from the church and sacristies. Externally the buildings are local stone, neatly hammer-dressed, and the roofs covered with Broseley tiles. The design has been carefully studied from the local work of the district, in which late fifteenth-century work of the rectilinear period abounds. A stone *fliche* marks the division between nave and chancel, and rises to a height of 70 feet, and contains two fine toned bells cast by Messrs. LEWIS & Co., of Brixton. An entrance porch, with niche and figure of the patron saint, leads into the nave, 61 feet by 24 feet, and the chancel 28 feet long, with the organ chamber placed on the north side, and oak benches or choir stalls. The east, west, and other windows are filled with fine series of glass by

MESSRS. LAVERS, WESTLAKE & Co. The eastern window has the Crucifixion, with figures of the Blessed Virgin and St. John, and patron saints. The gas standards were supplied by Messrs. HARDMAN & Co., of Birmingham, and the warming is on Haden's principle. The font, of carved stone with an oak spire, is placed at the south-west corner, and the church is seated with benches of pitch pine. Messrs. HADFIELD & SON, of Sheffield, were the architects.

BLOCHAIRN FREE CHURCH, GLASGOW.

## THE ARTISTS' BENEVOLENT INSTITUTION.

LORD WOLSELEY presided on Saturday at the annual dinner of the Artists' General Benevolent Institution, held at Willis's Rooms. Supporting the chairman were Lord Crewe, Sir Frederick Leighton, P.R.A.; Colonel King-Harman, M.P.; Mr. Carbutt, M.P.; Mr. Pender, M.P.; Mr. J. Frith, R.A.; Sir John Gilbert, R.A.; Mr. J. E. Millais, R.A.; Lieutenant-Colonel Edis, Colonel of the Artists' Volunteer Corps; Mr. F. Holl, R.A.; Mr. Colin Hunter, R.A., and a large number of artists. After the usual loyal toasts, the Chairman, in proposing "Prosperity to the Artists' General Benevolent Fund," referred to the increasing number of those who adopted art as a profession, tempted by the high prizes which fell alone to the few men of unusual ability. Beyond these were others who were comparatively successful in the race of competition, but behind all were hidden artists out of sight and almost out of mind, whose prosperity had been clouded by accident or disease, some dead, leaving widows and orphans unprovided for. By such men and their families severe suffering was sustained, suffering often enhanced by a spirit of independence and a delicacy of feeling which made them unwilling to make their condition known. It was the special purpose of the Institution to mitigate such suffering without making known the names of the recipients. During 1883 the sum of 3,961*l*. was expended in 169 applications of this kind, the working expenses of the year amounting to 325*l*. 10*s*. 8*d*. From the foundation of the Institution in 1814, sums, amounting in the aggregate to 68,503*l*., had been granted in relieving 4,158 cases. Much as had been done by the Institution in the past, it was to be feared that its sphere of operations would have to be extended in the future, on account of that growing disposition to adopt art as a profession in many cases by persons who had no natural qualifications. Affiliated to the Institution was an offshoot for the orphans of artists and for the benefit of their widows. Its funds were kept entirely distinct from those of the Institution, and it well deserved the attention of those who had the means to contribute to charities. In this case as in that of the Institution there was the most careful economy in expenditure, the honorary secretary, Mr. J. E. Millais, R.A., and the treasurer, Mr. P. C. Hardwick, sacrificing their time and labour personally to the work. He was sure of the sympathy of that assembly in expressing a hope that as years rolled on so excellent an institution would go on flourishing, and make itself still more worthy of the noble profession by whom it had been created, and for whose interest it existed.

The Chairman, in giving the next toast, that of "The Royal Academy," coupled with the name of the president, referring to the severe criticisms to which the Academy was subjected, said he had come to the conclusion that it was in the same position as his own profession in being assailed by men whose keenness of criticism was in exact proportion to their ignorance of the subject. At any rate, he thought he was expressing outside opinion in saying that so long as the Royal Academy covered their walls with such magnificent works of art as were now on exhibition they would retain the confidence of the nation.

Sir Frederick Leighton said the toast which Lord Wolseley had just proposed in such kindly terms was always sure of a cordial reception at that table, because they knew that the Royal Academy, in the persons of its members, took the deepest interest, and participated in the high and noble work which the noble Lord had by his presence come to support. No bonds were more stable than those which were knit by common concert to worthy ends in a good cause. Those bonds would never be loosened on the side of the Royal Academy, and he was not the less certain that the representative of the Royal Academy would at all times receive that kindness for which, not for the first time, he had now to tender his warmest thanks. A privilege attached to the duty he had just discharged, that was to invite them to join in a hearty and cordial expression and recognition of good fellowship in regard to those numerous other societies in the metropolis which existed, as the Royal Academy existed, solely for Art's sake. He should not count them up; they were numerous and growing in numbers, but while they increased the scope of their efficiency they would not outgrow their sympathy. In the course of the proceedings the treasurer, Mr. P. C. Hardwick, announced that the sum of 1,376*l*. had been subscribed that evening.



## FOREIGN IDEAS ON ART INSTRUCTION.

THE following is taken from the second report of the Royal Commissioners on Technical Instruction, which will be interesting as showing certain opinions held abroad in regard of art teaching on the Continent. The Commissioners say:—Whilst on the Continent, we heard many flattering opinions as to the vast importance of certain technical and art schools that we visited. We also received opinions and evidence of a more critical character, which we have no desire to ignore. One gentleman, of large experience and knowledge, warned the Commissioners against recommending the too extensive establishment of high art schools on the Continental model. Referring to the Antwerp Academy of Fine Arts, with which he was very familiar, he said that much greater care should be exercised in England than at Antwerp as to the admission of students. It is quite a mistake to open the door to all who wish to enter, when no charge is made for the teaching. These academies are excellent institutions if kept to their right use; they bring deserving and talented students to the surface, and benefit the State as well as the students; but a very careful discrimination should be exercised over the admission of students, or the public funds may be wasted upon incompetent and unworthy recipients. Every sentimental youth believes himself to be a born artist, or, what is quite as bad, his father and mother think him so, and, seeing the success of some really talented student, they fondly hope for and expect the same from their son, and they send him to an Academy to become a painter. Why should they not send him? The tuition costs nothing, and it sounds well to be able to speak of a son who is studying at the Academy, and it is flattering to hear the high praise of neighbours who are called in to see and admire the drawings he has sent home. The youth severely drains the slender resources of his parents while for three or four years he goes through the courses at the Academy, and encounters the more serious temptations which all large towns offer to young men who are removed from parental control and influence. The young man may be destitute of talent, or lacking in the equally important quality of perseverance, and returns to his home expecting the world to bow at his feet, and give him his own price for the third-rate productions which he has to sell. The self-styled artist, conceited from the beginning, naturally becomes discontented, and may afterwards be found (as our friend has found many) with his coat out at elbows, unable to earn a living; a wretched professional artist, without imagination or designing faculty, pushing indifferent pictures upon an overstocked market. When a peasant's son paints *Andromeda Chained to the Rock*, or *Ajax Defying the Lightning*, he often assumes airs altogether incompatible with his position or his possibilities. Very few of these free students ever become artists of merit, still fewer really good industrial designers, but they often get into an extravagant way of living, without possessing the means to justify such habits, and they grow up into a class of men of far less use to the world than if they had remained hewers of wood and drawers of water in their own villages. Above all, avoid encouraging the idea that it is the schools which make the artists, designers, and engineers, and that, given the schools, great artists will spread themselves over the land. There can be no greater mistake. Belgium and Holland produced their best artists without schools, Holland its best engineers without schools, and what schools did the great inventors of England attend? The work of life puts into the shade the teaching of the professors. If you are too liberal in opening the highest schools to the public, without such safeguard as a proper entrance examination, you draw mediocrity into them, and run a great risk of wasting your teaching on students who, whatever other qualities they possess, were never intended for artists. The free art schools are a constant temptation to the stripling, whose great ambition is to become a "Monsieur" without working for the title; he goes there and fails to produce anything that anybody will buy. There is no happiness for such a man; he had better have remained a house-painter at home. In studying Continental art schools, it is desirable to reckon up their cost and compare it with the results. Education has to be paid for by somebody, and in those cases in which the payment is made entirely by the public, there should be a reasonable assurance that the public will be benefited. The great art schools of France and Belgium are admirable institutions, but, as examples for England, they present features to be avoided as well as to be imitated.

One gentleman remarked that, from his large experience of foreign nations, he had come to the conclusion that race and blood have great influence upon the handicrafts of a nation. The French are more elegant than the English, altogether apart from education. Their climate is milder and more sunny, gaiety is natural to them, and, living much more in the open air than the English, their natural tastes are more susceptible of development. The French designs are characterised by greater elegance. In Paris the designers are surrounded by examples and aids to inspiration such as cannot be found elsewhere. Paris, to use a commercial term, may be called "the exchange" for designers from all parts of Europe, and it is the principal market for designs. The draw-

ing of the Parisians is generally of a decorative character, and in freedom of outline they excel all other countries.

On the fancy textiles of England and France, and the aptitude of French workmen, the following is the substance of opinions expressed. The productions of Lyons are now universally acknowledged to be in advance of those of Coventry and the other silk manufacturing towns of England. The workman of Lyons, who, as a matter of fact, lives in the same attic with his loom, is always making patterns. He spends his days from childhood to old age over patterns, and the last pattern in the loom is the household topic till the web is woven. As the loom is seldom allowed to be idle, both the wife and children are taught to weave each new pattern as it comes. While the husband eats his dinner the wife takes her turn at the loom, and the children take their turns also while the father takes his rest and the mother goes about her domestic employment. So all day long the busy shuttle is kept going, and patterns and designs are ever before the physical and mental vision of the Lyons weaver. The day may come when England will overtake Lyons; but how can she hope, by the establishment of a few schools, to equal what natural qualities and constant training have done for the Frenchman? It is in the opinion of our informant no more reasonable to expect the English to surpass the French in artistic work, in designing and decorative operations, than it would be to expect the French to equal the English in mechanical ingenuity and in the great engineering operations which have so largely contributed to the industrial supremacy of England.

## THE INSTITUTION OF CIVIL ENGINEERS.

AT the last ordinary meeting of the session, held on Tuesday, Sir J. W. Bazalgette, C.B., president, in the chair, a paper read was on "Wood Pavement in the Metropolis," by Mr. George H. Stayton. The author directed attention to the nature and extent of the various wood pavements in the metropolis, and to a comparison of the results obtained. The aggregate length of the streets of London was 1,966 miles, of which, excluding 248 miles in course of formation, 1,718 miles were thus maintained by various authorities, namely:—Macadam, 573 miles; granite, 280 miles; wood, 53 miles; asphalt, 13½ miles; flints or gravel, 798½ miles.

The existing area of wood pavement was 980,533 square yards, and its estimated cost 600,000*l*. Not more than 4·38 per cent. was east of the city or south of the Thames. The method of construction adopted by the author was described and illustrated. His practice was to set out the levels of the channels so as to allow a rise to the crown of the road equivalent to 1 in 36 above the mean channel-level. The inclinations of the channels should not exceed 1 in 150, and numerous street gulleys should be provided. An extra cost of 4 per cent. for gulleys was money well spent. The foundation of the Chelsea pavements consisted of a bed of concrete 6 inches deep, composed of 5½ parts of Thames ballast to 1 part of Portland cement; the entire cost for materials and labour when completed was 2*s*. 3½*d*. per square yard. The use of old broken granite as a substitute for Thames ballast, although cheaper, was not recommended. Concrete made from that material was less homogeneous than pure ballast concrete.

The greater part of the wood pavement in London was composed of rectangular blocks of yellow deal. Before adopting wood pavement the author inspected the various kinds of pavement then laid, and came to the conclusion that a plain but substantial system was the best. The blocks were 3 inches by 9 inches by 6 inches, and were specified to be cut from close and evenly-grained, well-seasoned, and thoroughly bright and sound Swedish yellow deals (Gothenburg thirds). The author knew of no more suitable wood in the market, which so satisfactorily stood the wear of traffic and atmospheric changes. Of hard woods, pitch pine took a high place in point of wear, the ascertained annual vertical wear of the section in King's Road during four and a half years being 0·055 inch only. Neither elm nor oak blocks would withstand the atmospheric changes to which street surfaces were exposed; larch would probably take a high position, but the available supply was limited. In many pavements the blocks had been dipped in a creosote mixture; in a few instances they had been creosoted or mineralised, but at least one-third had been laid in their natural condition. The ordinary dipping process was of little value as a preservative, but might be utilised as an external discolouration for inferior blocks. The author had tried creosoted blocks, but experience had convinced him that they were not more durable than plain, that their surface was less clean, that the system was 20 per cent. more costly, and that it tended to produce premature internal decay. The wood pavement in Chelsea required 41 half blocks per square yard; they were laid upon the concrete in their natural state, with the fibres vertical, and with intervening spaces three-eighths of an inch wide. The joints were filled with cement grout, composed of three parts of Thames sand to one part of Portland cement; they were kept parallel by means of three cast-iron studs fixed in each block, which rendered the pavement firm and steady until the grout was thoroughly set. A top dressing of fine gritty material completed the work. If practicable, traffic



should be excluded from a newly-laid pavement for at least one week after completion. The result of five years' wear convinced the author that the plain system comprised all the essentials of a sound pavement; that it provided a quiet and smooth surface for vehicles, and safe foothold for horses; that the cement joint adhered to the wood, effectually resisted wet, did not unduly wear below the wood surface, and thereby allow dirt to accumulate in the joints; neither did it displace the blocks. The net cost was 10s. 6d. per square yard, and but comparatively slight repairs had been found necessary. The blocks were originally 5'87 inches deep, but their present average depth was 5'22 inches in King's Road and 5'60 inches in Sloane Street, their probable life being seven and eight years respectively. Particulars of wood pavements in various parts of London were also given at considerable length; and in those instances where the approximate weight of the traffic per yard width was known, the details of cost, maintenance, durability, ascertained vertical wear of wood, &c., were described.

### ROMAN ALTAR AT GENEVA.

OPERATIONS were last winter begun in the bed of the Rhone, at Geneva, in connection with a scheme for utilising the power of the stream for mechanical purposes. During the work a part of the river bed, near the island on which stands Julius Cæsar's Tower, was laid bare, and owing to the antiquity of Geneva, and the fact that it was an Allobrogean town before it became a Roman station, hopes were entertained of making important archæologic finds, and lately there was found, buried in gravel among a range of piles, relics of the Lacustrine age, a block of white Jurassic rock, which has been evidently dressed by the hand of man, and having in the centre a circular depression surrounded by a sort of crown. Further examination showed it to be the upper part of a Roman altar. It is in the ordinary form of a pilaster, with capitals, and a corresponding base terminating in a crown, in relief, cut in the stone. The height of the relic is 80 centimètres, the width 33. There is no other trace of ornamentation than the mouldings and cornices of the upper and lower parts, but on the principal face there appears an inscription, in superb letters, and an admirable state of preservation. It runs thus:—*DEO NEPTVN C. VITALINIV VICTORINVS MILES LEGI. XXII. ACVRIS V. S. L. M.* Only two letters are lacking. At the end of the second word the engraver had not room for the final O, and at the end of the fourth word an S has been effaced by time, or worn away by water. The word *legionis* has been shortened into *LEGI*, but the truncation of the I may be due to an accidental erasure. The inscription, which is easily read, is to the following effect:—*Deo Neptuno C. Vitalinius Victorinus, miles legionis XXII., a curis votum solvit libens merito.* The author, therefore, was a soldier of the twenty-second legion, Caius Vitalinius Victorinus, who, having without doubt escaped shipwreck on the lake, had vowed to raise an altar to Neptune, the god of the waves, and by a singular chance the whole stone of the Jura which testifies to the fulfilment of his vow has been preserved by falling into the very waters from which he was saved. This deity was doubtless widely worshipped on the shores of the lake in the olden time. There is still in the harbour of Geneva a huge erratic block, known as the Pierre de Niton (Neptune), on which, according to tradition, sacrifices to Neptune were made, and traces of the *culte* may yet be found in song and story. Notwithstanding the beauty of the characters, the inscription of Vitalinius is not considered to date further back than the end of the second, or the beginning of the third century. The word *ACVRIS* should probably read *a curis*, and signifies that Vitalinius was entrusted with one of the special missions for which soldiers were generally chosen, such as inspecting a custom-house, levying taxes, or surveying roads. Besides this altar stone, several other objects have lately been found in the bed of the river; among them are the upper part of a tin vase representing, in relief, Diana and Endymion, and a transparent stone cut in facets; the latter, if not false, will be highly interesting and valuable.

### THE ROYAL MINT.

THE fourteenth annual report of the Deputy Master of the Mint has just been issued, and is the first report dealing with a complete year of work since the reorganisation of the Mint buildings and machinery.

The old books and papers of the Mint, it appears, have been subjected to thorough examination and classification, under the direction of the Deputy Keeper of the Records, and a schedule has been prepared of all documents which should, in the opinion of the Master of the Rolls and the Master of the Mint, be destroyed, and of those which should be preserved. This schedule, as finally revised, will be submitted for the approval of the Master of the Rolls, and will then be laid before both Houses of Parliament. The books and papers not considered worthy of preservation will, at the expiration of four weeks' time, be destroyed.

The only additions of coins of past reigns made to the Mint Collection during the year were a guinea of Charles II. and a guinea of William III., which formed part of a parcel of twenty-two coins said to have been found in pulling down some buildings in Ayre Street, Chancery Lane, and sent to this department, as is usual in cases of treasure trove, for examination. The coins did not possess any special numismatic value, but the two pieces, of which no specimens were included in the Mint Collection, were purchased by the department at a price slightly above their value as bullion.

The melting and coining operations of the year were both very large, but the department, as newly organised in 1882, had no difficulty in meeting the demand both for Imperial and Colonial coin. The second rolling-room was in constant work during the year, and the use made of duplicate engine-power and duplicate machinery in the various stages of coining abundantly showed the necessity for the changes effected. Two metals were with but little intermission melted and coined simultaneously throughout the year, and the increased number of the coining-presses has made it possible to strike, when necessary, more than half a million pieces in a single day. The new machinery in all its branches has worked with smoothness and regularity, and from the date of the resumption of coinage operations in December 1882, there has been no suspension of work in consequence of even temporary derangement. When it is considered that new machinery almost invariably requires at least some adjustment before it can be said to be in perfect working order, this result must be taken to be highly satisfactory. Since the beginning of the current year sanction was obtained for the purchase from the Metropolitan "Brush" Company of the plant necessary for lighting the front of the Mint buildings, and the larger rooms of the operative and assay departments, and the system of electric lighting has therefore been permanently adopted. Its use has been attended with much advantage, and may gradually be extended to other parts of the Mint.

The Mint being authorised to strike the medals required for the International Fisheries Exhibition of 1883, nearly 1,300 medals in gold, silver, and bronze were delivered during the year. The design for this medal was made by Mr. Lewis F. Day, and the die engraved by Mr. John Pinches. On the obverse is the effigy of Her Majesty, which was designed and engraved by Mr. Leonard Wyon, modeller and engraver of the Mint, with the inscription "Victoria Regina." The reverse represents the various kinds of well-known fish, with a fishing net, and the inscription "International Fisheries Exhibition, 1883."

### THE WELLINGTON STATUE.

ON Monday morning, the 19th inst., the statue having been handed over to the military authorities, a number of artificers from the Arsenal were set to work erecting scaffolding and in punching off the heads of the rivets which held the head of the Duke to the body. On Wednesday morning the head with its cocked-hat and plumes was deposited on the ground. A curious discovery was then made in the interior of the Duke's cocked-hat, in the shape of a perfect bird's-nest. The nest had been built on the crown of the Duke's head, and entrance to it was effected from under the ends of the great plume at the point of the hat. The dimensions of the hat are 4 feet long by 1½ foot high, the plume measuring 3 feet across, and the head and hat weighing about half a ton. It was found by Colonel Close on inspection that the monument had been cast in a great many pieces, four of which were rivetted together with bolts, the others being forged together at the foundry, and therefore not being capable of division without injury to the work. The four rivetted portions were the head and body of the Duke, and the head and tail of the horse. Before these were divided it was necessary to find the position of the bolts from inside. A workman of medium size was hoisted for this purpose up to the neck, now bereft of the head, and he, with the greatest ease, slipped through the Duke's collar into the hollow bodies of the rider and the horse. He found plenty of room to stand up and walk about inside with freedom. The body of the Duke, he found, was joined a little below the sword-belt, the horse's head from the withers to a point above the breast-plate in front, and the tail at the crupper. Throughout the metal was not less in thickness than half an inch, in some places being as much as 2½ inches thick. The legs of the horse were solid, in order to support the weight of the statue, computed in all at 30 tons. The whole monument, with the exception of the plume, which is of copper, is made of gun-metal of rather inferior quality, being that of guns captured by the Duke in his various engagements. The workmen have since been engaged in cutting the screws which held the trunk of the Duke to the horse's back, and on Saturday it is believed that the work will have advanced sufficiently to allow of it being taken down. When this has been completed, the horse will be turned upside down and placed on its back on a specially-constructed truck now being built at Woolwich Arsenal. This will have to bear a weight of over 18 tons. It will be fully a month before the monument is ready for starting for Aldershot, and it will



be some time on the road, as a circuitous route will have to be taken to avoid weak bridges, hills, and archways. Mr. Boehm is busily engaged in modelling the new statue, but the work has not sufficiently advanced to permit inspection, though before it is cast it will be open to view. The spurs of the now partially-demolished statue, which were thought to have been lost, are in safe keeping at the Offices of the Board of Works. The statue will be re-erected outside the headquarters of the Aldershot garrison.

## YORK ARCHITECTURAL ASSOCIATION.

ON Saturday last the above Society commenced a series of visits to be made during the summer months to places of special interest. The list includes Whitby and Kirkstall Abbeys, Bridlington and Howden Priory Churches, York and Ripon Minsters, St. Mary's Abbey, York, and the Yorkshire College and the Coliseum, Leeds. On Saturday, therefore, a large number of the members visited Leeds. Arriving at Marsh Lane, the party, by the invitation of Mr. Jas. Holroyd, proceeded to inspect the Terracotta and Faience Works of Messrs. Wilcock & Co., at Burmantofts. Mr. Holroyd accompanied them through the various departments of the works and explained the different processes of manufacture. After the inspection Mr. Holroyd entertained the visitors.

## BUILDWAS ABBEY.\*

BUILDWAS, for its first twelve or thirteen years, belonged to the Savigniac Order. Vital de Mortain, first abbot of Savigny and founder of the Order, died in 1122. St. Bernard, about eight years previously, had founded Clairvaux. An intimacy subsisted between these two men. The energies of both were directed to a reformation of the Benedictine Order. When Savigny was founded, in 1112, the Cistercian rule, although originated in 1098, was yet incomplete, and its ordinances were not fully settled till the first Chapter General, held at Cîteaux in 1119, at which St. Bernard, as Abbot of Clairvaux, was present. In 1147, Clairvaux being still under the Abbot of St. Bernard, and having acquired an extraordinary importance, the respect of the first Abbot of Savigny for its head, and the institutions under which he ministered had ripened in the fourth Abbot of Savigny into a desire for a complete union with and assimilation to the Cistercian Order. Thus, between 1147 and 1148, Savigny, with upwards of thirty dependent abbeys, among which was Buildwas, became subject to Clairvaux.

Buildwas was founded in 1135, only twelve years before the union of the two Orders. But the foundation of an abbey by no means implies the commencement of its permanent buildings, and many instances may be cited of this. Temporary erections were sometimes resorted to, and a start made in the intended work, waiting till means afforded the opportunity for the erection of the permanent structure, just as in these days a temporary church is often succeeded by a permanent one. The choice of the site of an abbey seems always to have had great care bestowed upon it, and none better could have been selected than that of Buildwas. To the north flows the Severn; to the west a tributary stream which was made to fertilise the broad meadows which stretched along the northern bank of the river; to the south-east there extended a vast wood the reclamation of which was part of the programme of the inmates of the abbey.

The waters of the valley which runs up southward of the abbey were made to serve for working the abbey mill and for the supply of the fishponds to the west of the abbey buildings, and it may be to the abbey itself. The pond to the south-west, now dry, was probably the mill-pond, below which the mill was situated, and its tail water flowed down first to the fishponds to the north-west, and then to the meadow land between the abbey buildings and the river, all of which may even now be distinctly traced. This mill-pond was just outside the enclosed abbey precincts, as may be seen from the fragments of wall running east and west near to the north end of it. This wall was 2 feet 6 inches thick, and was built of squared stones on both faces, as may still be seen in several places. Near to the east bank of the tributary stream may be traced what would appear to have been the western boundary, and to the north of the fishponds the southern boundary on the riverside. A fishpond nowadays conveys the simple idea of sport; but not so with the monks, for it must be borne in mind that their diet consisted largely of fish, and the "cultivation" of its growth was an important part of the economy of their establishment, and for this reason their elaborate system of what are known as "stews" prevailed as surely as did their buildings.

Of the great entrance to the abbey precincts nothing now remains, but it was probably near to the south-west corner of the site, not far from the length of outer wall which still remains.

Nearly opposite this there is a hollow between two mounds which may indicate this entrance. At the entrance was stationed a porter, who regulated admission to the abbey and reported the presence of guests to the abbot, who visited them here, and after they had attended a "service," as we should say, in an adjoining oratory specially provided for the purpose, were entertained by the abbot in apartments known as the "hospitium." At the entrance alms to the poor were also distributed. Within a court next to the entrance were arranged the workshops of various descriptions, where the clothes of the inmates were made, and where those engaged in the work of repairs and of building on the estate were accommodated, as well as the other trades essential to a large and isolated society. Separate from these stood the church and its appendages, and the rooms and dormitories used by the monks themselves, including those old or infirm or sick, as well as those active and strong, and fulfilling all the minutiae of their religious vows. In the general arrangement of their buildings the church was always the most important and prominent feature. No matter how large the establishment, there was no exception to this rule.

The relative position of the church and buildings took different forms, regulated by the peculiarities of site, the advantages of which seemed always to have been duly balanced and the best choice made. In most cases the conventual buildings were placed to the south, but in this case at Buildwas they are on the north side, the higher level on the south being chosen for the church and the more sheltered and lower level next the river for the buildings. The church itself was always placed with its longer axis east and west. The present remains are extensive, the principal being those of the church and the buildings immediately north of it. Besides these there is further north an arcade of five arches running east and west, and the south and west walls of the abbot's house, and the east and south walls of the abbot's chapel, all of which, with some other walling, are incorporated in the house now known as the Abbey. The style and character of the original buildings exhibit the features and details common in the early years of the latter half of the twelfth century, and they were probably erected between the years 1150 and 1170. The church consists of nave, with north and south aisles, seven bays in length; north and south transepts, with two eastern chapels to each, a central tower, and a chancel. The internal length of the nave is 100 feet, and the total length from west to east is 156 feet. The nave and chancel are in one unbroken line from end to end. The transepts project 24 feet 4 inches each north and south. The east wall of the chancel, against which stood the high altar, has now three windows of considerable height; but it is evident that originally there were six windows in this wall, three ranging with the window on the north side and three below. The arches and hood mouldings of these original windows are apparent, and it is clear that the horizontal string-courses have been cut through and the walling between the two heights taken out, so as to convert them into the three lancet windows as at present seen. The window on the south side has been treated in the same manner. On this wall and throughout the buildings the original mason's marks are distinctly visible; a double triangle is to be seen in many parts of the church and elsewhere. In the south wall of the chancel is a sedilia of three seats and an aumbry; the latter is of original construction, but the former has been inserted at a later date. It is very beautiful in its design, and displays an excellent example of dog-tooth carving in the hollow moulding of its arches. The north wall contains one window, which originally ranged with the upper windows of the east end, and shows what those windows were.

The chancel was divided into two bays by groined arches, which were quadripartite, the springers of which still remain both at the four angles, and in the centre of each flank wall. The variety in these springers, and their exquisite beauty of design, is to be specially noted. The internal facings of the chancel, and of the walls of the church generally, are what may be termed rough ashlar, the stones being coursed, but not truly squared, and having wide joints. These facings were plastered, the remains of which are to be seen in the splays of south window, in the walls of the tower, in chapels, transepts, aisles, east gable of south aisle, and elsewhere. The joints of the walling everywhere have been filled with red tiles, and this prevails even in the remaining fragment of the south boundary wall.

The intersection of the nave and chancel with the transepts, called "the Crux," is formed of four bold-pointed arches, with a square-edged sub-arch and a hood mould, all started from corbelled springers, the walls above rising in the form of a low tower, in which there are two windows in each face, and at the south-east angle there is a stair turret. Beneath the windows was a floor, the ends of its beams being still seen, so that the tower did not take the form of a lantern inside the church. Its roof probably started immediately above the heads of the side windows, as there was a clear intention of keeping the walls low; the sills of the windows being placed as close to the abutting roofs as possible. The projecting lines of the rakes, and the grooves in the walls of the four gables starting from the tower, are still in their place. The internal height of the window is to be seen on the north side. The tower was not groined; its walls are 5 feet in thickness. The four eastern chapels to the transept are similar in design. They

\* From a paper read by Mr. Charles Lynam, of Stoke-on-Trent, Diocesan Surveyor, on occasion of a visit paid by the members of the North Staffordshire Naturalists' Field Club.



had a quadripartite vault, but the ribs of the groining are all gone, the springers alone remaining. To the east was a single-light window, with a string course below its sill, below which there stood an altar in each chapel; on the south side of each is an aumbrye recessed within the wall, and also a drain from a piscina, which projected from the face of the wall. The plaster facing to these chapels is distinctly visible on the south wall of the north chapel. This plastering was not the thick coat which we now put on, but a thin, hard lining of coarse material. There are a few stones in the walls of these chapels which appear to bear marks of carving of an earlier date than the church itself. The arches to these chapels are of the simplest form, and the walls in which they are placed are 5 feet 6 inches thick. The rebate for the door of the aumbrye is to be seen in the north chapel. The transepts are of two bays; the walls have a plain splayed base course, a string below the windows, and another at the level of the abacus of the tower piers. At the south-east angle of the south transept is a stair turret which led to that at the corresponding angle of the tower, and there is a doorway in the south gable near to the west wall. The south gable is 4 feet 9 inches thick, and appears to have had two windows like those at the west end of the nave. The transepts were not groined, nor the tower, nave, or aisles. The chancel and chapels alone were vaulted. In the gable of the north transept there is a doorway to the vestry, with steps down to its lower level. Also a doorway now blocked up from the dormitory of the monks. The holes in which the handrail was fixed are still apparent. The lower stones of an elaborate screen between this transept and the north chapel still remain.

The body of the church has seven bays. Its eastern piers are octagonal and all the others cylindrical. The three eastern bays formed the presbytery, and were screened off by walls about 7 feet high above the level of the floor. The remainder of the nave was also screened off by walls about 4 feet 6 inches high, leaving the aisles as processional paths only. There was one entrance into the church near the west end of the north aisle, and another at the east end for the monks from the east walk of the cloister. The evidence of the screen walls to the nave arcades is perfectly distinct from the appearance of the masonry in the lower part of the piers, and from the fact that the base mouldings are only continued to the aisle side of the columns and the cross-screen is marked by the masonry of the third pier from the east. The former presence of timbers at the west end, and also at the east end, and in the second piers from the east, are marked by the holes which received them. The shafts to western arch of tower are stilted so as to start above the screen walls.

The diameter of the nave columns is 4 feet 6 inches, and their height between cap and base 8 feet 8 inches to presbytery, and 10 feet 10 inches at the west. One of the tower windows next the nave has its original form complete in every respect. Of the roof of the nave nothing remains except that its pitch is distinctly marked against the wall of the tower. The west end of the nave has two large windows in the lower part, with apparently three smaller ones above. The absence of the usual west doorway is remarkable, and is peculiar, if not unique. The internal arch of the clerestory windows was carried by nook shafts, with carved capitals. A string runs below the sills, and at the level of the spring of hood mould. The corbel table on the outside of the north wall of the nave is still in its place for a short length. The western gables of the aisles still remain, but the flank walls are gone. These gables had each a window to the west, and the rake of the lean-to roofs is distinctly marked at the east end. The chamfered plinth course runs at the foot of these walls as well as elsewhere. The holes which received the ends of the timbers carrying the wall plates at the head of the roof remain, and in two cases the ends of the timbers are still to be seen. The thickness of the aisle walls is 3 feet. Externally, the west end of the church has angle and two central buttresses, with weatherings to the projecting base courses. There are very skilfully cut chevrons, and other enrichments, in the arches of the windows. The staircase at the south-east corner of the south transept has projected beyond the face of the wall, and there is a central and end buttress to this gable. The chapels east of the transept have an angle and a central buttress, and the rake of the lean-to roofs is visible, as well as the corbel table and eaves cornice. Also, string mould under the windows, which have hood moulds. The east gable has two central and angle buttresses, and weathered base mould. It will be noticed that all the windows throughout are in single light—there is no approach to anything like grouping in them. They are all circular-headed, and have strings beneath the sills and hood moulds to the arches of the heads. There are no grooves for glass visible, but holes which received the cross-bars are to be seen.

The whole design of this church is characteristic by its great simplicity, its massive construction, yet withal artistic treatment of its several parts, and extreme beauty of its details; and, further than this, the constructive skill which it exhibits is extraordinary. Look at the rough and rude filling of the vaulting to the chapels, where mere covering had to be provided, and then turn to the exquisite masonry of the columns and arches, which had to carry ponderous weights, and the scientific skill of the builders must be fully acknowledged. It will be seen that all the main constructive arches, such as the arcade of the nave, those to the tower, and to

the eastern chapels are of the pointed form, whilst those to the minor features, such as windows and doors, are semicircular. There has been much speculation as to the origin of the pointed arch, and it has been put down to accident and all manner of fanciful notions; but the real student of Gothic architecture knows that it arose from a structural necessity in the covering of spaces by means of the vault, and everyone who has examined with care the early application of the pointed arch knows well that the ancient builders employed it simply for its scientific and artistic effect. The best view of the interior of the church is perhaps from the west end, looking east, whence the arcades of nave and the arches of tower, aisles, and chapels are seen to perfection. Leaving the church, the first place to be entered is a crypt which lies under the end of the north transept and one chapel. Its ingenious entrance is from the east walk of cloister. It is vaulted in three bays, and a cross arch carries the massive wall of the chapel above. Between the western bays of vaulting there is a central rib as in the eastern chapels; the other groin ribs have gone. It was lighted by a window at the east end, which has now been turned into a doorway. In this crypt is to be seen what was the usual treatment of the rubble filling to the vaults, one of the bays retaining its original plaster facing. The care taken in the filling at the keys and at the groin points is well worthy of notice. This crypt, it has been suggested, was for the purpose of receiving the bodies of the monks after death, and in preparation for the last rites of their religious faith. This seems probable, as it was entered conveniently from the cloister and was next to the church.

The next apartment is the sacristy (now used as a passage). It has an entrance from the cloister-walk, and now another from the garden to the east, where originally was the window which lighted it. This is also groined; the only rib remaining is the one in the centre of its length. On the north side are two recesses in the thickness of the wall, with circular arched heads. They were probably used as cupboards for vestments, &c. Next to the sacristy is the chapter-house, where the monks met for the transaction of the business of their community. It is a remarkable apartment in many ways. On entering it everyone must be struck with the extreme beauty of its design, with the lightness of its construction—contrasting forcibly with the massive work of the church—and with the artistic delicacy of its details in mouldings and carvings. The proportion of height to diameter of the nave columns is a little more than 2 to 1—here, they are  $5\frac{1}{2}$  to 1. The level of the floor is considerably below that of the cloister-walk, from which it was entered by steps. The natural fall of the ground dictated this in a measure; but there can be no doubt that it was the determination of the monks to have a handsome place of assembly which prescribed this peculiarity. Height could not be obtained upwards, as that would have interfered with the level of the dormitory above. The chapter-house was lighted by three windows to the east and one on each side at the east end; the northern one is now blocked up. The entrance and the arches on each side of it were also open. There are traces of original plaster to be seen both on the walls and groining. The room measures 41 feet east and west, and 31 feet north and south. It is divided by four columns into three bays in each direction, and each bay has a quadripartite vault, the ribs of which are intact. Externally, the arches next cloister-walk are simple, bold, and effective. To the east the three windows have strings below them and hood moulds, also two central and angle buttresses. The part projecting from the main walls was treated as a lean-to, the corbel tabling to which still remains.

Over the chapter-house, vestry, passage, and probably over the ambulatory was the dormitory of the monks, which was roofed in a single span abutting on to the north transept of the church at its south end. The positions of the columns which carried the roof across the eastern projection are shown by their bases, which still remain. The range of windows looking west with a string at their sill are also still in their place. Beneath the floor of the chapter-house, according to Cistercian rules, repose probably most of the abbots. Within the chapter there is a collection of very interesting fragments found in and about the abbey precincts, amongst them several stone coffin lids of great interest and beauty. One stone bears part of an inscription incised therein; it appears to be in Norman French, and reads "Hue: le: fiz: "

Next to the chapter-house northwards is a passage from the cloister to the gardens lying east of the church. It has a groined roof, and the dormitory extended over it. Immediately abutting upon this passage is the end of a return wall which ran westwards with the springer of an arch in it, and no doubt this range formed the north side of the cloister. The staircase to the monks' dormitory was probably in this part, abutting on to the next apartment, the remains of which are considerable. It has been termed an "ambulatory" where the monks mustered in common for the enjoyment of as much relaxation as their rigid rules allowed. Its three arches to the east still remain, massive in character, and open to the air. The walls bear evidence that this room was groined, and it is pretty certain that it had two central columns after the manner of the chapter-house. The level of the floor above this room corresponds with that over the chapter-house, and in all probability the monks' dormitory extended over it. To the east of this room, and about twenty-five yards distant,



stood the abbot's house, the west and south walls of which are still discernible. That to the east has five single light windows in it of peculiar and interesting treatment, and over these are quatrefoil and trefoil windows, which (though this has not been observed before) appear to me to have been dormers. At the south-west angle of the abbot's house was the abbot's chapel, part of the east and south walls of which are still to be seen. One cannot but admire the abbot's choice of the site for his lodging. Apart from the traffic of the cloister, and other busy parts of the monastery flanking to the south, overlooking the gardens and hills to the east, and commanding a view of the east end of the church and monastery, no place could have been better chosen.

Between the abbot's house and the building before called the ambulatory, a small cloister square was formed, to the north of which it is supposed that the infirmary stood, its flank against this small cloister being formed of an arcade of five bays, the columns and arches of which still remain, against the responds of which the ends of abutting walls are seen, showing that there were other buildings extending northwards from each end of this arcade. It should be noticed also that the northern faces of these arches indicate that the apartment they enclosed had a groined roof, and it is probable that in this, as in the ambulatory, there was at least one row of internal columns. There are indications of string courses, and other features, which show that this little cloister was surrounded by a pent roof abutting against the buildings forming the square, and the southern arch of the ambulatory has the raking weathering of a gable showing that between it and the abbot's chapel there ran a span roof. In the present coach-house is a stone lintel over an opening very elaborately carved.

In looking at the east side of the church and all the buildings north thereof, it should be borne in mind that the present level of the ground is much higher than it was originally, by reason of which the lower parts of the buildings are buried to a considerable extent. The northern side of the great cloister court was no doubt occupied mainly by the refectory, which ran north and south, and the kitchen and buttery. The western side provided accommodation for lay brothers, stores, &c., and in the middle of it an archway ran through it which was the main entrance to the monastery proper. Between this western range and the cloister there was an open passage through which the church was entered near to the west end of the north aisle. In engravings of the buildings made some years ago, the arch, which was blown down in 1823, between this open passage and the west wall of cloister is shown, and there are still indications on the ground of its position, as there are also of the extent of the western range of buildings near to the old thorns by the side of the dry fishpond.

The number of monks originally on the foundation is not known, but it has been calculated that the choir would accommodate about thirty-four. At the time of the suppression there were only nine, with thirty-six servants. The lay inmates are said to have been usually not less than five times that of the monks. It has been suggested that the monks of Buildwas, having built their monastery, stood still in inactive content and opposed to further progress, as their buildings do not indicate alteration or addition subsequent to the thirteenth century. But it surely may be said that the original founders closely calculated the needs of the community, and designed their buildings accordingly; and as no accession in numbers of any importance occurred, the successive generations went on in contentment, and, without change, housed and accommodated in a domicile well planned, and built in a manner which pillage and exposure for more than three hundred years have not even yet reduced to erasure.

### THE JAFFRAY HOSPITAL, BIRMINGHAM.

THE designs for the Jaffray Suburban Hospital, of which the foundation-stone is to be laid on Wednesday next, have been prepared by Mr. H. R. Yeoville Thomason, of Birmingham. It will consist of a central portion, with two boldly projected wings, and will afford accommodation for fifty patients. If it should be required, extensions may be made for fifty more patients by adding wings to the rear, without interfering with the harmony of the internal arrangements, or affecting the architectural symmetry of the buildings. The central block is to be devoted to administrative purposes, and the wards occupy the two wings, and as the whole group of buildings front towards the south, the wards will have the sun falling upon one or other of their sides throughout the day. The hospital will be two storeys high, and the entrance to it will be by a central porch, facing a curvilinear carriage drive and lawn. Upon the ground floor there is an entrance hall, 17 feet by 13 feet, and beyond it, running right and left, a spacious main corridor leading to the wings. To the left of the entrance hall, and communicating with it by wide folding doors, is the waiting and receiving room, and close to this are the dispensary and dispensary stores. The three apartments communicate with one another *en suite*, but they have each of them separate doors into the corridor. Upon the right of the entrance hall there are, similarly placed, the surgeon's sitting-room and the officers' dining-room the latter measuring 20 feet by 15 feet.

Beyond the transverse corridor a sub-corridor conducts to the kitchen, serving-room, housekeeper's room, and other domestic offices, where a back entrance is also provided. At either end of the main corridor is a staircase hall with stairs to the upper floor, and a sub-corridor leading to the wards.

The west wing is intended for male and the east for female patients, two wards—one on the ground floor and the other on the first floor—being allotted to each class. A description of the ground-floor male ward answers for them all. It is entered from the end, and is 54 feet 6 inches long by 24 feet wide, with a height of 14 feet. As it is arranged for twelve beds there will be a cubical space for each patient of nearly 1,500 feet. It is planned in such a manner that a window is arranged between every two beds, securing abundance both of ventilation and of light. The ward has five windows overlooking the front lawn, four upon the opposite side and three at the end. The floor will be of oak, and the walls will be plastered for painting. In addition to the ventilation furnished by the windows, fresh air will be introduced by Tobin's tubes, and circulation maintained by Boyle's extractors, in connection with which will be air-passages between the ceiling and floor above, communicating with vertical shafts. Two open fireplaces in the ward will assist both the heating and ventilation, and hot-water pipes will also be laid on. Near the entrance to the ward is a ward-room for the accommodation of special cases requiring separation from the rest of the patients, and a kitchen or nurses' room. A small projecting building near the junction of the wing with the main building furnishes the various sanitary offices for each ward. The eastern or female wing exactly corresponds with that just described. In each case the first floor repeats most of the features of the ground-floor plan; it gives a second ward to each wing similar in dimensions and accommodation to those below.

In the central block there are in front the matron's sitting-room, bedrooms for other officers, and at the rear over the kitchen and stores are four bedrooms for the night nurses. A third storey in the roof of the central section affords sleeping accommodation for the servants and day nurses. Two lifts are provided near the centre of the main corridor, one of them for patients and the other for culinary uses. There is a considerable fall in the land, so that the boiler-house, coal-stores, and other conveniences will open upon a yard which will be of use in many ways.

The building is in the Queen Anne style, and composed of red brick, with terra-cotta mouldings, string courses, cornices, and window archings.

### ARTISANS DWELLINGS IN BIRMINGHAM.

A SPECIAL committee appointed by the Birmingham Town Council to inquire how far the dwelling-house accommodation for the artisan and labouring classes in the borough is sanitary and adequate, and what amelioration it is in the power of the Council to effect, have made their report. From the report it appears that in every ward in the borough there is a large number of void houses of the class under inquiry, and it is shown that out of 65,969 houses within the borough at 7s. per week and under, 5,273, or nearly 8 per cent., are void, these "voids" pretty evenly distributed through all the wards of the borough. The greatest number of insanitary dwellings were found in St. Mary's and St. Bartholomew's Wards, old, small house property, badly arranged, and built in a confined and insanitary manner. Much of the old property had fallen into a very dilapidated condition, but in most cases the leases will expire in the course of a few years, and the properties will probably be pulled down. In Bordesley and All Saints' Wards were a large number of "jerry building" houses, built of improper and unsubstantial materials, and of inferior workmanship. So far as the committee could ascertain, none of this class of buildings had been erected since 1876, the year when the Council adopted a code of by-laws with respect to new buildings, and appointed a building surveyor to see that such by-laws were carried into effect.

In considering the amelioration possible to be made, the committee have had their attention called to the desirability of a more complete supervision of new buildings, with a view of seeing that the by-laws were strictly complied with. In 1876, when the by-laws came into force, and the building surveyor was appointed, 2,903 houses and shops were erected, but that number has gradually declined, until in 1882 only 666 new buildings were erected, and in 1883, 938. In the opinion of the borough surveyor the present staff, which includes two clerks of works (one specially appointed to superintend the construction of drains), in addition to the building surveyor, is sufficient; but if the number of new buildings erected should again assume the proportions of 1876 and 1877, further assistance will probably be necessary. At the present time five inspections of each building in course of erection are made, and are considered ample. The committee are, however, of opinion that not only should compliance with the deposited plans, and with the by-laws as to thickness of walls, &c., be insisted upon, but that extreme care should be exercised in the supervision of materials used in the course of construction. They are also of opinion that no house should be allowed to be inhabited until it



has been examined by some competent officer of the Council, and a certificate given by him that such house is fit for occupation. As regards the staircases, which in many of the existing houses are not only dark, steep, and narrow, but positively dangerous, the committee have ascertained that by a curious omission from the Public Health Act, 1875, the Council had no power to interfere with their construction, but that by the Birmingham Corporation Act, 1883, the Council were empowered to make by-laws with reference thereto, and that such by-laws are now under the consideration of the Public Works Committee.

In consequence of the increasing value of land within the borough, and the consequent increase of rents, the advisability of the erection of workmen's dwellings in "flats" was suggested to the committee, as by that means several dwellings could be erected for one ground rent. The committee consider, however, that the erection of dwellings in "flats," as generally understood, consisting of several storeys, the one building holding several families, is not desirable; and there was a consensus of opinion on the part of the witnesses, and especially of the working men themselves, that such a system was not adapted to the English workman, who preferred a self-contained dwelling. The attention of the committee was, however, directed to dwellings of two storeys, each storey being complete in itself, and having separate means of entrance. Such a system might, in the opinion of the committee, be tried with advantage on a small scale as a means of providing good accommodation at a comparatively low cost.

In arriving at their conclusions, the committee are convinced that at the present time there is adequate dwelling-house accommodation for the artisan and labouring classes in the borough, and that there is no special necessity for the erection of additional dwellings. The dwelling-house accommodation in the several wards was, generally speaking, found to be in a fairly sanitary condition. The committee consider it desirable that some model dwellings, constructed upon the best sanitary principles, and let at reasonable rents, should be built and serve as models for workmen's dwellings which may be erected hereafter. The committee do not recommend that this work should be undertaken by the Council, but they consider that for many reasons it is one which would be best undertaken by private enterprise, and they believe that in Birmingham there is sufficient public spirit to carry out the recommendations now made. Among their recommendations the committee suggest that all new houses should be certified by some competent official before the same are allowed to be inhabited; that extreme care should be exercised by the building surveyor in the supervision of the materials used in the construction of houses; and that the staircases of new houses should be better constructed.

## REVIEWS.

**THE STUDENT'S PRACTICAL GUIDE TO MEASURING AND VALUING ARTIFICERS' WORK.** Fifth Edition. By E. WYNDHAM TARN, M.A., Architect. (Crosby Lockwood & Co.)

It is unnecessary to eulogise a book like "The Guide to Measuring," which has secured by its intrinsic worth so permanent a position in professional literature. The late Mr. Edward Dobson, who was the original editor, had a talent for book-making, and it has been supplemented by Mr. Tarn's scientific skill. The guide contains sufficient elementary information to enable beginners to use it, and there are so many tables and memoranda, that it can be often turned to account in a surveyor's office.

**HINTS ON THE DRAINAGE AND SEWERAGE OF DWELLINGS.** By W. P. GERHARD, C.E. (New York: W. C. Comstock.)

The necessity for effective sanitary appliances is apparently more urgent in the United States than in England. The skill which the Americans have shown in making shams that are deceptive to knowing people appears in house drainage, and many a shrewd proprietor in the cities has paid high prices for things which are less valuable than wooden nutmegs, since they are more dangerous. Even the simplest class of work can be converted into a snare by the skill of the workmen. Mr. Gerhard tells us that "there is scarcely another detail in a system of drain-pipes for a dwelling in which so much rascality or criminal stupidity is shown than in the manner of making joints on an iron pipe. Such pipes are often jointed with paper, covered with sand, or else some cheap mortar is thrown into the space between spigot and socket; in other cases putty is used or red lead. Wherever joints are in sight some lead is perhaps poured on top of the sand to give the joint the appearance of having been done with the proper material." In a country where such malpractices are to be expected, it is requisite that ingenuity should be exercised in order to limit the workman's opportunities of doing evil, and American sanitary engineers have endeavoured to introduce appliances that in laying shall be attended with a minimum of risk. In Mr. Gerhard's book there are descriptions of the best English and American inventions, and it suggests what advance has been hitherto made in sanitation on both sides of the Atlantic. The writer is impartial in his selection and in his descriptions, and we assume that his interestedness does not lie in any particular invention. The book has nearly three hundred diagrams.

## WORKS IN PROGRESS.

**North Ormesby.**—The gas-fittings throughout for the Wesleyan chapel, North Ormesby, near Middlesbrough, consisting of coronæ brackets and pendants, have been supplied by Messrs. Jones & Willis, of Birmingham and London.

**The Patent Fanlight Opener** of Mr. R. Adams, of Great Dover Street, has been selected in competition for the Great Eastern Railway Hotel, Liverpool Street. The order is the largest received by Mr. Adams for any hotel in this country. It is not long since he received a large order for fanlight openers with the patent safety screw regulator for the Parkestone Hotel, Railway Station, and Shipping Office. These acquisitions to health and comfort are eminently suited for such places, as visitors are enabled to regulate their ventilation without risk or aid, and its neatness well accords with the luxurious surroundings.

**Non-arsenical Wall Paper.**—The walls of the corridor surrounding the Water Companies' Pavilion at the International Health Exhibition have been papered with Messrs. William Woollams & Co.'s non-arsenical washable papers, the upper part sienna and the lower part rouge royal marble, by special desire of Col. Sir Francis Bolton.

**The Indestructible Paint Company, Limited**, have received an order from Mr. T. Graham Jackson, the architect, of No. 2 Kensington Court, to supply "Browning's Patent Paint," of which the company are the manufacturers, for the whole of the work of this building.

## ARCHÆOLOGY.

**A Roman Villa** has been discovered at Woolstone, in the Vale of the White Horse, Berkshire, and some fine tessellated pavements have been disclosed. Several interments have also been disclosed, apparently of the Anglo-Saxon period. The seax or knife-dagger is, strange to say, still attached to the girdle of two of the bodies, presumed to be those of Anglo-Saxon ladies.

**Pontefract Castle Grounds.**—During the progress of the drainage scheme being carried out in Pontefract, some interesting discoveries were brought to light. A well has been discovered near the Booths, which in all probability was used by the inmates of St. Nicholas's Hospital, at one time the oldest foundation in Pontefract. In crossing Grange Field, where stood the Priory of St. John the Evangelist, founded by Robert de Lacey in the time of William Rufus (1090), some vestiges of the monastery have been brought to light, and it is believed by some antiquarians that the foundations of the structure still remain intact, buried at no great depth. During the excavations other interesting relics have been found in the shape of pottery ware, &c. A museum is in course of preparation, where many objects of interest connected with the past history of Pontefract are to be preserved.

## ENGINEERING WORKS.

**Dock at Maryport.**—A new dock constructed at Maryport has been opened. The dock is 850 feet long by 300 feet wide, and a passage 50 feet wide. The depth of water on the dock sill at ordinary spring tides is 25 feet. The dock and basin cover an area of 10 acres, and these improvements at Maryport make the port the largest of any between the Mersey and the Clyde, with the exception of Barrow. The total cost is about 220,000*l.* Mr. Doherty, of Dublin, is the contractor, and Sir John Hawkshaw, Son & Hayter, London, the engineers.

**Steam Tramways.**—On Tuesday morning the official inspection of the new line of tramways from Dudley to Stourbridge took place. The route is 5½ miles in length. It is a single line of rails with passing places at convenient distances. The system of line construction is "Barker's Patent," which consists of a steel rail securely fixed with cast-iron keys to cast-iron continuous sleepers having a broad flange, the sleepers in turn resting upon a firm bed of lias lime concrete. Each single rail weighs 42 lbs. per lineal yard, and each sleeper 112 lbs., or thereabouts, giving 66 tons of steel rails and 176 tons of cast-iron sleepers for each mile length of single line of two rails. One strong point claimed by the inventor in favour of this particular kind of rail is that a length of rail may at any time be replaced in the sleepers without necessitating the removal of the paving. The dépôt and grounds, Tipton Road, Dudley, contain an area of some 1,200 superficial yards. Accommodation is provided for eight engines and eight cars, and there are also erected suitable buildings for board-room, offices, repairing shop, coke and oil stores, &c. The engines are those known as "Kitson's," and are of locomotive type, having surface air condensers. They are constructed to meet the requirements of the Board of Trade, and they can be worked from either end. Automatic steam and other brakes of great power are provided, and complete control of the engines can be had by the driver when ascending or descending the various steep hills upon the route. The weight of each engine is about eight tons. The cars, supplied by the Starbuck Company, of Birkenhead, are



specially constructed for steam traction, and have two four-wheeled bogie frames. The cars are provided with powerful brakes, which can be applied by the driver of the engine or the conductor on the car from either platform to the whole of the eight wheels at the same time. The entire works of line and depot construction have been carried out by Mr. John Fell, contractor, of Leamington, from the design and under the personal supervision of Mr. E. Pritchard, M.Inst., C.E., of London and Birmingham.

### CHURCH BUILDING AND RESTORATION.

**Desford.**—The parish church of St. Martin, at Desford, has been reopened after thorough interior restoration. The architect under whose supervision the work was carried out was Mr. Stockdale Harrison, of Leicester. Mr. A. Dilks, of Desford, had the contract for the chancel, and the altar rails were supplied by Mr. Elgood, of Leicester. Mr. Hewitt, Leicester, erected the vestry and supplied the altar table, reading-desk, &c., besides reseating the church, and Mr. Cunningham, of Leicester, did the stonework in the nave. The total outlay will be nearly 2,000/.

**Stratford-on-Avon.**—On Saturday Mr. Mackeray Turner, with whom was Mr. Micklethwaite, of the Society for the Preservation of Ancient Buildings, visited Stratford-on-Avon for the purpose of making an examination of the parish church, and advising on the subject of its restoration. Numerous letters have been addressed to the mayor describing the proposed restoration as an act of vandalism, and even urging the public to subscribe to a fund for "protecting the church from the hands of so-called restorers." The committee decided to invite the co-operation of the society, which has for its object the preservation of ancient buildings. The committee, which includes the mayor and the vicar and members of the town council and churchwardens, met the society's deputation by appointment at the parish church, on Saturday, and a careful inspection was made of the interior and exterior of the building. After making a minute examination of the tower, Messrs. Turner & Micklethwaite stated that in their opinion there was no immediate danger. The breach was not of a recent date, and there was no indication of its having widened. The roofs of the nave, the north and south aisles, and the chancel were declared to be in a good state of preservation, and the lead-work remains almost intact. It was intimated by the society's deputation that their recommendations would be contained in a report which would be presented to the committee in due course. It was understood that they were in favour of the removal of the galleries, and were also not opposed to the construction of a centre aisle.

### SCHOOL BUILDINGS.

**Honley.**—The Congregationalists of Honley, near Huddersfield, have just opened a new school. The building is of a superior character, and has been erected on the site of the old school, from designs by Mr. B. Stocks, architect, Huddersfield. The school has a large room and gallery capable of seating 600 persons, and nine class-rooms and kitchen. The cost is about 2,000/.

**Olton.**—The foundation-stone of the Olton Church Schools was laid on Monday. The building will accommodate 153 children. The erection is to consist of large school-room, 62 feet long by 20 feet wide, and a class-room 18 feet by 15 feet 6 inches. Its walls are to be of red bricks. The building is so arranged upon the site that additions may be made to it, including a master's house. The work is being carried out under the superintendence of Mr. Benjamin Corser, architect, of Colmore Row, Birmingham, by Mr. William Chaffer, builder.

### NEW BUILDINGS.

**Holloway.**—A block of shops and industrial dwellings, in Benwell Road, has been completed by Mr. W. T. Niblett. The buildings comprise four large houses, three of them having on the ground-floor, on each side of the doorway, a shop, which may be had fitted with a fireplace and be used as a dwelling-house. If used as a shop there is a bedroom and kitchen behind it, with arrangements for range, sink, copper, coal-cellar, dustbin, &c. Behind the shops is a concreted drying-yard for the exclusive use of the inhabitants of the ground-floor. Upon the first floor the rooms are larger. On one side of the landing are four rooms, on the other three. These are all fitted in the same way as those on the ground-floor. The passage between the shops is laid with Staffordshire tiles, and at the end of these are the stairs leading to the upper floors. These are made of stout pitch-pine planks, the wall being coloured at the top and painted. The rooms upon the first floor are spacious. The fireplaces and mantels are of iron, cast into a handsome pattern, with fluted fireclay backs to the stoves, and all the fittings are substantial and good. Upon the top of the houses is a drying ground, covered with perforated flooring.

### GENERAL.

**The Prince of Wales** has undertaken the post of President of the Royal Windsor Tapestry Works, which was held by the late Duke of Albany.

**Count Gleichen** has been elected an honorary member of the Royal Institute of Painters in Water-Colours.

**The Annual National Fine Art Exhibition** was opened, at Madrid, on Saturday last by King Alfonso. The exhibition is in the principal annexe of last autumn's Mineralogical Exhibition, in the park of Madrid.

**The Queen** has conferred the honour of knighthood on Mr. Frederick William Burton, F.S.A., Director of the National Gallery of London.

**A Memorial Statue** of Lord Stratford de Redcliffe, the work of Mr. Boehm, has been unveiled in Westminster Abbey.

**A Bronze Statue** of John Brown arrived at Balmoral on Saturday, and is to be placed on a pedestal erected about two hundred yards to the south-west of the Castle.

**The Royal Archaeological Institute** have issued a provisional programme for this year's meetings, which are to be held at New-castle from August 5 to 13 inclusive. The excursions which have been arranged include visits to Warkworth, Alnwick, Jarrow, Morpeth, Prudhoe, Chillingham, Holy Island, Durham, and other places of interest. The Duke of Northumberland is to be the president of the meeting.

**It is reported** from Athens that while the foundations of the new theatre at Piræus were being laid, the workmen came across indications of an antique structure, which, it is expected, will turn out to be a temple of Dionysius. The building operations have consequently been stopped, and the place is to be excavated.

**Mr. C. W. Digby**, Birmingham, has given a site in the Green Lanes on which to erect new homes for the Birmingham Homes for Destitute and Working Boys. The cost of erection of the buildings is estimated at about 2,000/.

**The Select Committee** of the House of Lords on the Manchester Ship Canal Bill have decided that the preamble had been proved, but exacted from the promoters as a condition of the Bill being proceeded with that a clause should be inserted prohibiting the commencement of the works until 5,000,000/ of capital had been "subscribed and issued."

**The Managers of the Metropolitan Asylums District** have applied for the consent of the Local Government Board to the erection of a hospital for small-pox patients at Gore Farm Estate, Essex, at a cost of 70,000/.

**The South-West Queensferry Caisson** of the Forth Bridge was successfully launched on Monday afternoon. The caisson is 70 feet in diameter, and the total weight is about 200 tons. Its depth, when launched, was 44 feet, and when finished it will be about 55 feet. This is the first of four caissons required for the bridge.

**The Clothworkers' Company** has voted 2,000/ towards the 20,000/ required for the complete equipment of the new Central Institution of the City and Guilds of London Institution. This is in addition to their original building grant of 10,000/ and their annual subscription of 3,000/.

**The Birmingham Architectural Association** on Tuesday evening held the last meeting of the session, under the presidency of Mr. F. E. F. Bailey, when a paper on "Architectural Perspective" was read by Mr. J. King James, illustrated by drawings and sketches. A discussion followed and a vote of thanks to the lecturer, in which Messrs. H. H. McConnal, Victor Scruton, W. H. Kendrick, and Franklin Cross (hon. sec.) joined, concluded the proceedings.

**Messrs. Rownson, Drew & Co.** have secured the contract for the girder work for the City of Exeter Lunatic Asylum, now being built by Mr. Henry Phillips, of that city.

**Messrs. Tancred, Arrol & Co.**, the contractors for the Forth Bridge, have been sued in the Scottish Courts by one of their labourers for damages for injuries alleged to have been received by an iron pillar weighing two tons falling and breaking his leg. The jury have found the defendants liable, on the ground that they failed to have a competent superintendent in charge of the work at the time the accident occurred, and have assessed the damages at 300/ sterling.

**Builders' Benevolent Institution.**—An election of four pensioners on the funds of this institution was held at Willis's Rooms, St. James's, on Thursday last, Mr. Henry G. Smith, president, in the chair. There were eleven candidates for the four vacancies—viz., nine men and two women. The poll was open from two to four p.m. The scrutineers, Messrs. Thomas Stirling and Thos. F. Rider, announced the results of the polling, and the successful candidates were declared to be William Mansell, William Voysey, Thomas Theodore Spradbury, and Lilius Greig. Votes of thanks were accorded to the scrutineers, the vote-takers, and the chairman, and the proceedings terminated.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, MAY 31, 1884.

### TENDERS, ETC.

As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

### COMPETITIONS OPEN.

**BURNLEY.**—July 1.—Plans are required for the Erection of Municipal Buildings, Police Courts, and Baths. Premiums of 200, 100, and 50 guineas. Mr. J. E. Stafford, C.E., Borough Engineer, Burnley.

**DERBY.**—June 2.—Designs are required for the Erection of a Pauper Lunatic Asylum for the Borough at Rowditch. Premiums of £100, £75, and £50. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**LILANELLY.**—May 31.—Plans are required for a School in Three Departments (Boys, Girls, and Infants). Mr. J. Jennings, Clerk to the School Board, Lilanelly.

### CONTRACTS OPEN.

**ABERDEEN.**—June 7.—For Constructing Bridge over Upper Denburn Street. Mr. Boulton, Surveyor, Town House, Aberdeen.

**ALDERBURY.**—June 6.—For Additional Cells to Tramp Wards at Workhouse. Messrs. John Harding & Son, Architects, The Canal, Salisbury.

**ARMAGH.**—June 6.—For Alterations and Additions to Craigs Church. Mr. John Lanyon, Architect, 1 Alexandra Chambers, Lombard Street, Belfast.

**ARMAGH.**—June 21.—For Building Manse. Mr. J. H. Fullerton, Architect, Armagh.

**ARNSIDE.**—June 10.—For Rebuilding West End of Church. Mr. S. Shaw, Architect, Kendal.

**ASHTON-UNDER-LYNE.**—June 2.—For Building Two Shops, with Warehouses attached. Messrs. T. D. & J. Lindley, Architects, Henry Square, Ashton-under-Lyne.

**BASINGSTOKE.**—June 6.—For Building Hunting Stables, Coachhouses, &c. Mr. John Hillary, Architect, Long-parish, Hants.

**BIRKENHEAD.**—June 16.—For Building Sessions Court, &c., Chester Street. Messrs. T. D. Barry & Son, Architects, Commerce Court, Lord Street, Liverpool.

**BOSTON.**—June 5.—For Building Post Office. Mr. A. B. Mitford, Secretary, H.M. Office of Works, 12 Whitehall Place, S.W.

**BURNLEY.**—June 2.—For Building Dwelling-houses. Mr. A. Robinson, Architect, 20 Hargreaves Street, Burnley.

**BURNLEY.**—June 9.—For Erection of Farm Buildings and Villa Residences, Lower Readley Estate. Messrs. W. Waddington & Son, Architects, 5 Grimshawe Street, Burnley.

**BURSLER.**—June 2.—For Building Sunday Schools and Mission Hall. Mr. A. R. Wood, Architect, Tunstall.

**CARDIFF.**—June 3.—For Building Stables, Coach-house, &c. Mr. John P. Jones, Architect, 26 Park Street, Cardiff.

**CARDIFF.**—June 10.—For Additions to Premises, Bute Docks. Mr. John P. Jones, Architect, 26 Park Street, Cardiff.

**CARLISLE.**—For Building Great Musgrave Rectory. Mr. T. Taylor Scott, Architect, Clydesdale Bank Buildings, Carlisle.

**CARLISLE.**—May 31.—For Building Home for Incorables Mr. G. D. Oliver, Architect, Bank Chambers, Carlisle.

**COVENTRY.**—May 31.—For Alteration of Britannia Hotel. Mr. W. Langley, Architect, 18 Smithfield Street, Coventry.

**DONCASTER.**—June 7.—For Building Post Office. Messrs. Wilson & Masters, Architects, Hartshead Chambers, Sheffield.

**DOWNEND.**—June 3.—For Additions to National Schools. Mr. James Hoddell, Architect, Downend, Bristol.

**DURHAM.**—June 14.—For Additions to certain County Police Stations. The County Architect, Durham.

**ENNISCORTHY.**—June 20.—For Additions to District Lunatic Asylum. Mr. Morley, Building Surveyor, Commercial Buildings, Dublin.

**EXETER.**—For Pulling Down and Rebuilding Premises. Messrs. Packham & Croote, Architects, 93 Paris Street, Exeter.

**GRAVESEND.**—June 7.—For Building Schools for 450 Children. Mr. W. F. Gosling, Architect, 9 Walbrook, E.C.

**HAMPTON WICK.**—June 7.—For Erection of Local Board Room. Mr. R. T. Elsam, Architect, Westbourne Villa, Hampton Wick.

**HEYWOOD.**—For Building Four Houses and Shops. Mr. Thomas Nuttall, Architect, Bury.

**IPSWICH.**—June 5.—For Building School. Mr. Binyon, Architect, 4 Princes Street, Ipswich.

**LANCASTER.**—June 16.—For Building School, Laundry, Swimming Bath, &c., Ripley Hospital. Mr. W. Wright, Surveyor, Lancaster.

**LIMERICK.**—June 7.—For Building Chapel. Mr. W. Hagne, Architect, 62 Dawson Street, Dublin.

**MARKET RASEN.**—June 7.—For Works to Parish Church Tower. Messrs. Charles Kirk & Sons, Architects, Sleaford.

**MIDLAND RAILWAY.**—June 6.—For Building Stables for Twenty Horses, Loose Boxes, and Horsekeeper's House at Walsall, and Additional Mess-room at Bromsgrove. The Clerk of Works, Camp Hill Station, Birmingham.

**NANTWYLO.**—June 14.—For Building School for 331 Children. Messrs. Blessley & Aspinall, Architects, Guildhall Chambers, St. Mary Street, Cardiff.

**NETHERTON.**—June 12.—For Erection of Schools and Caretaker's House, and Enlargement of Infant School at Dudley. Mr. J. B. Marsh, Architect, 202 Wolverhampton Street, Dudley.

**NORTHALLERTON.**—June 4.—For Building Passenger Station at Danby Wisko. Mr. William Bell, Architect, North-Eastern Railway, York.

**NOTTINGHAM.**—For Building Four Shops, Abattoir, and Business Premises. Mr. Herbert Walker, Architect, Newcastle Chambers, Nottingham.

**OXFORD.**—June 2.—For Building Infectious Hospital. Mr. W. H. White, C.E., Bath Court, New Road, Oxford.

**PLYMOUTH.**—June 9.—For Additions to Board Schools. Messrs. Hine & Odgers, Architects, Lockyer Street, Plymouth.

**SCARBOROUGH.**—June 6.—For Building Mission Church and Residence. Mr. W. Wright, Surveyor, Lancaster.

**SEATON, DEVON.**—May 31.—For Extensive Additions to Beach House for an Hotel. Mr. Eggar, Architect, 57 Gower Street, Bedford Square, London.

**ST. GEORGE-IN-THE-EAST.**—June 4.—For Building Girls and Infants' Schools, Cannon Street Road. Messrs. Wilson; Son & Aldwinckle, Architects, 2 East India Avenue, Leadenhall Street, E.C.

**STOCKPORT.**—June 2.—For Alteration of Bank Chambers for Extension of Free Library. Mr. Peter Peirce, Architect, St. Petersgate, Stockport.

**ULVERSTONE.**—June 14.—For Building School. Mr. J. W. Grundy, Architect, Ulverstone.

**WATFORD.**—June 14.—For Building School and Alterations to existing School. Mr. W. H. Syme, Architect, 52 High Street, Watford.

**WEOLLEY.**—June 14.—For Additions to Police Station. Mr. W. Cheake, County Surveyor, Hereford.

### TENDERS.

#### BRIGHOUSE.

For the Construction of an 18-inch Pot Pipe Sewer in Elland Road, Brighouse, Yorks, for the Local Board. Mr. R. F. ROGERSON, Surveyor, Brighouse.

Hudson & Kitchen, Halifax	£370 18 4
Slater, Halifax	342 0 0
McKnight, Halifax	320 0 0
Empsall, Brighouse	294 12 0
Hopkinson & Sons, Halifax	279 4 0
Jowett, Brighouse	266 10 0
Barraclough & Son, Rastrick	248 17 9
Bedford, Halifax	236 6 0
Slinger, Cleckheaton	232 7 0
Bateman, Wyke	229 10 0
Hall, Bradford	218 2 3
NAYLOR, Scholes (accepted)	204 0 0

#### BRIGHTON.

For Alterations at No. 20 Russell Square, Brighton. Mr. ARTHUR LOADER, Architect, Brighton.

BARTLETT (accepted)	£140 0 0
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For Alterations and Repairs to Five Cottages, Norfolk Street, Brighton. Mr. ARTHUR LOADER, Architect, Brighton.

Hackman	£190 0 0
Barnes	187 0 0
Lockyer	169 0 0
NEWMHAM (accepted)	161 0 0

For Additions to Brewing Plant and other Works to be done at the Portside Brewery, near Brighton, for Messrs. John Dudney Sons & Co. Messrs. SCAMMELL & COLYER, Engineers, 18 Great George Street, Westminster, S.W.

WILSON & Co., Limited, Frome (accepted)	£770 0 0
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#### BROMLEY-BY-BOW.

For Painting and other Work at the Poplar and Stepney Sick Asylum for the Managers. Messrs. A. & C. HANSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Robson	£1248 0 0
Proctor	1160 0 0
Gibben & Son	1185 0 0
Wythe	1135 0 0
Bothman & Son	1095 0 0
Derby	1030 0 0
McCarthy	1025 0 0
Fleming	895 0 0
STEVENSON (accepted)	895 0 0

For Repairing, Painting, Re-taping, &c., the Whole of the Venetians at the Poplar and Stepney Sick Asylum for the Managers. Messrs. A. & C. HANSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Riddle	£315 0 0
Atkinson	198 0 0
Haskins	191 12 0
Fuller Bros.	175 0 0
Goolton	166 0 0
Williams & Son	165 0 0
SIMPSON & Co. (accepted)	159 0 0



**BURNTISLAND.**

For Repairs at Outer Dock-heads of the Wet Dock Entrance of Burntisland Harbour. Mr. HENDERSON, Engineer.  
CHALMERS, Burntisland (accepted) . . . £455 9 6

**CHURCH STRETTON.**

For Building Tramp Wards for the Board of Guardians, Church Stretton. Mr. DEAKIN, Architect.  
Pugh, Hungerford . . . £468 10 0  
Price, Shrewsbury . . . 416 0 0  
Highley, Pitchford . . . 379 13 9  
Cross, Shrewsbury . . . 359 16 0  
GETHIN, Shrewsbury (accepted) . . . 357 0 0  
Chaloner, Hanwood . . . 345 10 0  
Heating apparatus, lavatory, bells, and fittings not included in the contract.

**COLNE.**

For Construction of Outfall Sewerage Works for the Colne and Marsden Local Board. Mr. HENRY BANCROFT, C.E., Engineer, Manchester.  
TURNER & SON, Heywood (accepted) . . . £6,076 17 10

**DUNFERMLINE.**

For Building the High School, Dunfermline.

*Accepted Tenders.*

\*Dick, mason . . . £2,779 5 0  
Mitchell & Kinghorn, joiner . . . 1,625 0 0  
Rolland, plumber . . . 344 6 0  
McQuar & Lambert, slater . . . 155 15 6  
A. & R. McGregor, plasterer . . . 102 17 0  
Stuart & Co., granolithic work . . . 249 10 0  
Bennett & Son, ironwork . . . 341 5 0  
\* With £354 10s. for Polmaise stone for facings.

**EASTBOURNE.**

For Alterations and Additions to Levington House, Upperton Road, Eastbourne, for Col. J. Sprot. Mr. A. MARDON MOWBRAY, F.R.I.B.A., Architect, Eastbourne.

Russell . . . £340 0 0  
Fowler . . . 330 0 0  
DORE & SONS (accepted) . . . 328 0 0

**ENFIELD.**

For Detached House at Enfield, for Mr. C. E. Jackson. Mr. HAMILTON, Architect.

		Extra for
		Conservatory, &c.
Harris & Wardrop . . .	£1,194 0 0	£98 0 0
Harper, Tottenham . . .	1,088 0 0	95 0 0
Harvey, Shepherd's Bush . . .	1,084 0 0	70 0 0
Sayer, Enfield . . .	985 0 0	—
Staines & Son . . .	948 0 0	88 0 0

**ESTON.**

For Roads and Footpaths, Levelling, &c., at Cemetery, Eston, for the Eston and Normanby Burial Board.

Walker & Dickinson, Saltburn . . . £245 0 0  
White & Co., Middlesbrough . . . 209 0 0  
Dixon, Fence Houses, Durham . . . 204 0 0  
Tearney, Normanby . . . 171 0 0  
Lonsbrough, South Bank . . . 169 0 0  
Burrows, South Bank . . . 168 0 0  
Coates, Normanby . . . 143 0 0  
McDONALD, South Bank (accepted) . . . 136 0 0  
Skipper, South Bank . . . 129 0 0  
Harvey, North Ormesby . . . 126 0 0

**GRAVESEND.**

For Erection of Boat Sheds, Dressing-rooms, &c., for the Gravesend Amateur Rowing Club. Mr. EDMUND J. BENNETT, Architect.

Spencer . . . £255 0 0  
Tuffee . . . 210 0 0  
Haslip . . . 187 0 0  
Whitford . . . 185 0 0  
Wallis . . . 180 0 0  
Archer . . . 180 0 0  
Gates . . . 147 0 0  
HULL (accepted) . . . 138 10 0

**GREENWICH.**

For the Erection of Additional Buildings and Workshops at the Greenwich Union. Mr. W. W. ALLEN, Architect. Quantities by Messrs. Franklin & Andrews.

Priestley & Gurney . . . £17,642 0 0  
Mowlem & Co. . . 17,119 0 0  
Jackson & Todd . . . 16,640 0 0  
W. & F. Croaker . . . 16,626 0 0  
Shaw . . . 16,600 0 0  
Jerrard . . . 16,048 0 0  
Martin Wells & Co. . . 16,000 0 0  
Kirk & Randall . . . 15,943 0 0  
Nightingale . . . 16,743 0 0  
Humphries . . . 15,663 0 0  
Bart . . . 15,498 0 0  
Tongue . . . 14,940 0 0  
HOLLOWAY (accepted) . . . 14,569 0 0

**HALIFAX.**

For Making Road (1,400 yards) from Boothtown to Claremont, with Brick Sewer, Retaining and Fence Walls, Kerbing, &c., Halifax. Mr. ESCOTT, Surveyor.

Cowdrey & Sons, Gloucestershire . . . £9,987 0 0  
Hall, Bradford . . . 9,408 0 0  
Hudson & Kitchen, Halifax . . . 9,214 0 0  
Stinger, Cleckheaton . . . 8,104 0 0  
Hopkinson & Sons, Halifax . . . 7,935 0 0  
G. & M. Naylor, Cleckheaton . . . 7,863 0 0  
Thorn, Brant & Tyson, Halifax . . . 7,705 0 0  
Horsfall Liversedge . . . 7,030 0 0  
Nowell, Manchester . . . 6,760 0 0  
Parkinson & Bower, Halifax . . . 6,456 0 0  
McKnight, Halifax . . . 6,145 0 0  
DROOK & SON, Halifax (accepted) . . . 5,994 0 0

**GOSPORT.**

For Additions to Police Station, Gosport. Mr. JAMES ROBINSON, County Architect, Winchester. Quantities by the Architect.  
Cave . . . £379 9 0  
Lane & Son . . . 319 8 0  
LOWE (accepted) . . . 305 0 0

**HATFIELD.**

For Building Cemetery Chapel, Lodge, Boundary Walls, &c., Hatfield. Mr. EDWIN DOLBY, Architect. Quantities by the Architect.

Rawson, Tick Hill, Rotherham . . . £1,200 0 0  
Davies, Hatfield . . . 1,140 0 0  
Wortley, Doncaster . . . 1,115 10 0  
Anelay, Doncaster . . . 1,089 0 0  
Ripley, Rotherham . . . 990 0 0  
ATHRON BROS. & GILL, Doncaster (accepted) . . . 950 0 0

**HEREFORD.**

For the Erection of a new Church at Kinnerton, Old Radnor, Kingston. Mr. T. NICHOLSON, F.R.I.B.A., Architect, Hereford.

COLLINS, Tewkesbury (accepted).

For the Partial Restoration of the following Churches, Herefordshire. Mr. THOS. NICHOLSON, F.R.I.B.A., Architect, Hereford.

St. Peter's, Hereford.

BEAVAN & HODGES (accepted).

Aymestry Church, near Leominster.

HILES (accepted).

King's Chapel Church, near Ross.

BEAVAN & HODGES (accepted).

**HIGH WYCOMBE.**

For New Organ Chamber, Trinity Church, High Wycombe. Mr. ARTHUR VERNON, Architect, High Wycombe and London.

Hunt . . . £189 0 0  
Gibson . . . 184 0 0  
Harris . . . 162 0 0  
TOOSLEY (accepted) . . . 147 15 0

**HOREHAM HURST.**

For the Erection of Gamekeeper's Lodge and Shooting Box on the Horeham Hurst Estate, Sussex. Mr. H. PERCY MONCKTON, A.R.I.B.A., Architect, 36 Great James Street, Bedford Row, W.C.  
ASNDOWN, Horeham Road (accepted) . . . £260 0 0

**HOVE.**

For New Shop Front, &c., 20 Western Road, Hove. Mr. ARTHUR LOADER, Architect, Brighton.

BRUTON, Brighton (accepted) . . . £150 0 0

For Alterations, &c., at 17 York Road, Hove. Mr. ARTHUR LOADER, Architect, Brighton.

BARTLETT, Brighton (accepted) . . . £196 0 0

For New Front to 51 Waterloo Street, Hove. Mr. ARTHUR LOADER, Architect, Brighton.

TAYLOR, Brighton (accepted) . . . £127 0 0

For Alterations to Shops, 21 and 22 Church Road, Hove. Mr. ARTHUR LOADER, Architect, Brighton.

Barnes . . . £207 0 0  
Lynn . . . 166 0 0  
Bruton . . . 156 0 0  
NEWMHAM, Brighton (accepted) . . . 154 0 0

**HURSTPIERPOINT.**

For Oriel Windows, &c., to Belmont, Hurstpierpoint, Sussex. Mr. ARTHUR LOADER, Architect, Brighton.

NORMAN, Burgess Hill (accepted) . . . £465 0 0

**KIDDERMINSTER.**

House and Studio for Mr. Geo. Lees, Kidderminster. This work is being carried out under the superintendence of Mr. John Mossop, A.R.I.B.A., not from his designs.

**KILSYTH.**

For Building Wesleyan Methodist Chapel, Kilsyth, Messrs. A. & W. BLACK, Architects, Falkirk. Quantities by Messrs. D. Duff & Henderson, Glasgow.

Gov, Kilsyth, mason . . . £615 7 11  
Petrie & Barrkier, Kilsyth, joiner . . . 496 0 0  
Logan, Kilsyth, slater and plumber . . . 77 16 0  
Enan, Falkirk, plasterer . . . 53 17 4  
Scottish National Glass and Glazing Co. (Limited), Glasgow, glazier . . . 40 19 0

Total . . . £1,284 0 3

**LANCING.**

For Villa at Lancing, Sussex. Mr. ARTHUR LOADER, Architect, Brighton.

SHERLOCK, Lancing (accepted) . . . £650 0 0

**LINCOLN.**

For Building Three Shops at the Corner of Eastgate and Bailgate, for the Lincoln Finance Company.

	Plate Glass.
Harrison & Sands . . .	£895 0 0
Wright . . .	230 0 0
Martin & Sims . . .	812 0 0
Otter & Broughton . . .	799 0 0
Harrison . . .	769 10 0
H. S. & W. Close . . .	759 0 0
	20 10 0
	749 0 0
	26 10 0

For some Structural Alterations and Extensions at the Gasworks at Bracebridge, Lincoln.

Morgan . . . £6,664 4 8  
Messrs Close . . . 6,498 15 0  
Crosby & Sons . . . 6,395 1 0  
Oter & Broughton . . . 6,379 12 0  
WRIGHT (accepted conditionally) . . . 6,355 0 0

**LONDON.**

For Alterations at 94 Lever Street, St. Luke's, for Mr. J. J. Sweasey.  
Davis . . . £121 10 0  
Staines & Son . . . 118 10 0

For Alterations at the Crosby Head, Old Street, St. Luke's, for Mr. Osborne. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

Royal . . . £509 0 0  
Steel Bros. . . 245 0 0  
SAMBLE (accepted) . . . 243 0 0

*For Pewterer's Work.*

Burley . . . £42 10 0  
Hellings . . . 34 0 0  
HEATH (accepted) . . . 33 0 0

For Construction of Brick and Pipe Sewer (3,953 feet), Hampstead, and Works in connection. Mr. C. H. LOWE, Surveyor.

Bottom Bros., Battersea . . . £3,633 0 0  
J. W. & J. Neave, Stratford . . . 3,950 0 0  
Felton, Kilburn . . . 3,798 0 0  
Nowell & Robson, Kensington . . . 3,500 0 0  
Everett & Co., Kensington . . . 3,500 0 0  
Wilson, Walthamstow . . . 3,350 0 0  
Rogers & Dickens, Notting Hill . . . 3,340 0 0  
Neave & Son, Paddington . . . 3,320 0 0  
A. & F. Culverhouse, Camden Town . . . 3,290 0 0  
Mears, Hammersmith . . . 3,171 0 0  
KILLINGBACK, Camden Town (accepted) . . . 3,150 0 0

For Alterations and Additions to the Branch School, Marlesford Lodge, Hammersmith, for the Managers of the Kensington and Chelsea School District. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C. Quantities supplied.

	Building.	Porch.
Knight . . .	£3,031 2 6	
Feltham Bros. . .	2,933 0 0	
Higgs . . .	2,800 0 0	
Priestley . . .	2,790 0 0	
Brown . . .	2,776 0 0	
Marten . . .	2,770 0 0	
Priestley & Gurney . . .	2,725 0 0	
Bryant . . .	2,718 0 0	
Howell & Son . . .	2,700 0 0	
Lyford . . .	2,609 6 6	
Dorey . . .	2,600 0 0	
Magee & Co. . .	2,597 0 0	
Humphries . . .	2,595 0 0	
Garrud . . .	2,569 0 0	
HAYNES, Alpertown, Harrow (accepted) . . .	2,404 15 6	

For Rebuilding the Gresham Hall, Gresham Road, Brixton, for the Company. Mr. THOMAS GOODCHILD, F.R.I.B.A., Architect. Quantities by Mr. J. W. Stevens, 1 Dyer's Buildings, Holborn, E.C.

	Building.	Porch.
Whithead . . .	£2,900 14 0	£174 6 0
Maxwell Bros. . .	2,523 0 0	120 0 0
Fox & Palmer . . .	2,490 0 0	130 0 0
Hall & Co. . .	2,469 0 0	125 0 0
Pack Bros. . .	2,394 0 0	124 0 0
Hobson . . .	2,376 0 0	120 0 0
Scrivener & Co. . .	2,308 0 0	119 0 0
Holliday & Co. . .	2,291 0 0	98 0 0
Higgs . . .	2,235 0 0	125 0 0
Macey & Cooper . . .	2,197 0 0	150 0 0
Ansell . . .	2,245 0 0	88 0 0
Smith . . .	2,123 0 0	114 0 0
Fish & Co. . .	2,097 0 0	95 0 0

For Painting, Whitewashing, Cleaning, &c., at the Infirmary in the Fulham Road, for the Guardians of the Poor of the St. George's Union, Hanover Square. Mr. H. SAXON SNELL, Architect, 22 Southampton Buildings.

Dorrell & Co. . . £375 0 0  
Traies & Son . . . 289 9 0  
Jenkins . . . 235 0 0  
McCarthy . . . 220 0 0  
Coombe & Sons . . . 220 0 0  
Barrett & Sons . . . 216 0 0  
Wilkins & Kent . . . 205 0 0  
Vigor & Co. . . 195 7 0  
Smith & Saunders . . . 182 8 0  
Stevenson . . . 159 15 0  
Scott . . . 157 0 0  
M. & M. FLEMING (accepted) . . . 150 0 0  
Bodin . . . 139 10 0

**LOUGHBOROUGH.**

For Construction of Streets, Sewers, &c. (1,800 yards), on the Derby and Ashby Roads, Paget Building Estate, Loughborough. Mr. E. WOOLLEY, Surveyor.

Hutchinson, Leicester . . . £3,611 11 0  
Ward, Leicester . . . 3,500 0 0  
Hawley, Ilkeston . . . 3,400 0 0  
Knight, Loughborough . . . 3,220 17 8  
Faulks, Loughborough . . . 2,997 0 0  
Gordon, Nottingham . . . 2,500 0 0  
Clarke & Co., Newbold Moor . . . 2,467 11 0  
MUSSON & Co., Belgrave (accepted) . . . 2,440 17 3

**OGBOURNE ST. GEORGE.**

For proposed New Vicarage, Ogbourne St. George, near Marlborough, Wilts, for the Rev. A. Pyne. Mr. C. E. PONTING, Diocesan Surveyor, Architect, Marlborough.

Wall & Hook, Brimscombe . . . £2,000 0 0  
Smith & Light, Chippenham . . . 1,500 0 0  
Stephens & Bastow, Bristol . . . 1,450 0 0  
Hillier, Marlborough . . . 1,410 0 0  
Hoskings, Hungerford . . . 1,322 0 0  
Phillips, Swindon . . . 1,300 0 0  
Elliott, Newbury . . . 1,292 0 0

**PELDON.**

For Building Small House at Peldon. Mr. JAMES F. GOODEY, Architect, Colchester. Quantities by the Architect.

Woods, Peldon . . . £460 0 0  
Ambrose, Colchester . . . 499 0 0  
Pitt, Colchester . . . 398 17 3  
Dupont, Colchester . . . 392 0 0  
Gladwell, Colchester . . . 367 12 0  
Oldridge, Colchester . . . 358 10 0  
Dobson, Colchester . . . 349 0 0  
CHAMBERS, Colchester (accepted) . . . 339 0 0



## PORTMADOC.

For Extension of Ballast Bank, Portmadoc Harbour, Mr. THOMAS ROBERTS, Assoc. M. Inst. C.E., Engineer.	
D. Jones . . . . .	£328 0 0
Hughes . . . . .	324 0 0
Owen . . . . .	272 0 0
W. Jones . . . . .	255 0 0
DAVIS (accepted) . . . . .	250 0 0
Engineer's estimate . . . . .	265 0 0

## SHEERNESS.

For Alterations and New Stabling at Premises, Cheyney Rock, for the Sheerness Co-operative Society, Mr. H. AMOKE, Architect. Quantities by the Architect.	
Webb . . . . .	£330 0 0
TAYLOR (accepted) . . . . .	322 0 0

## SOUTHAMPTON.

For Alterations to the Drum Hatch Chamber, Bridge Road, Southampton, Diverting certain Sewers, and Executing Works connected. Mr. W. B. G. BENNETT, Borough Surveyor.	
Crook . . . . .	£198 17 0
Crook & Smith . . . . .	180 0 0
Bull, Sons & Co. . . . .	175 0 0
MARTIN (accepted) . . . . .	149 0 0
Borough Surveyor's estimate . . . . .	165 0 0

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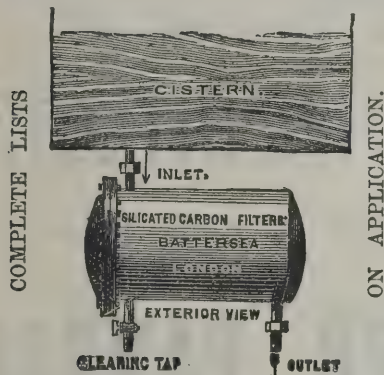
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## SHOREHAM.

For Alterations to Theatre and the Baronial Hall, Shore- ham, Sussex, Mr. ARTHUR LOADER, Architect, Brighton.	
Gates . . . . .	£680 0 0
BURFOOT, Shoreham (accepted) . . . . .	680 0 0

## SOUTHOWRAM.

For Building Boundary Walls, Draining, &c., Southowram  
Burial Grounds Extension. Messrs. J. BOOTH & SONS,  
Surveyors, Halifax.

## Church and Chapel Yards.

Washington, Sowerby Bridge . . . . .	£500 0 0
Bedford, King's Cross . . . . .	457 0 0
Pickles, King's Cross . . . . .	379 0 0
G. & H. Tyson, Halifax . . . . .	374 1 2
Nowell, Manchester . . . . .	324 11 10
Foster, Halifax . . . . .	324 6 0
M'Knight, Halifax . . . . .	295 0 0
Crossley, Hove Edge . . . . .	283 1 0
Empall, Brighouse . . . . .	272 0 0
CROWTHER, Southowram (accepted) . . . . .	272 0 0
Cocksedge, Brighouse . . . . .	268 0 0
Marshall & Greenwood, Southowram . . . . .	262 0 0
J. & J. Rushton, Swan Banks . . . . .	266 0 0
Churchyard only.	
Jackson, Hartishead . . . . .	102 0 0

## SOUTHEND.

For Constructing Flight of Artificial Stone Steps from the Cliff Parade to the Esplanade, Southend, Mr. A. CLAYTON, Surveyor.	
Wilkes Metallic Concrete Company, London £195 0 0	
Bullock, Southend . . . . .	141 5 6
Storey, Southend . . . . .	129 17 6
ANSON, London (accepted) . . . . .	100 18 0

## WORTHING.

For the Erection of a New Baptist Chapel in Christchurch Road, Worthing, Mr. RESTA W. MOORE, Architect.	
J. Blaker, Worthing . . . . .	£2,798 0 0
R. Blaker, Worthing . . . . .	2,781 0 0
Stanbridge, Broadwater . . . . .	2,780 0 0
Snewin & Son, Worthing . . . . .	2,756 0 0
Smith, Worthing . . . . .	2,637 0 0
Wood, Weybridge . . . . .	2,607 0 0
Peters, Horsham . . . . .	2,435 0 0
SAWLE, Worthing (accepted) . . . . .	2,419 5 11

## WROTHAM.

For Alterations and Additions at Fairseat, Wrotham, Kent, for General Kembell. Mr. H. PERCY MONCKTON, A.R.I.B.A., Architect, 36 Great James Street, Bedford Row, W.C.	
MANLEY, Stansted, Kent (accepted).	

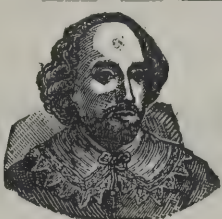
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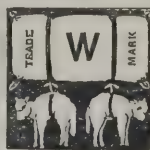
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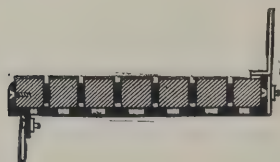
# LINDSAY'S

## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

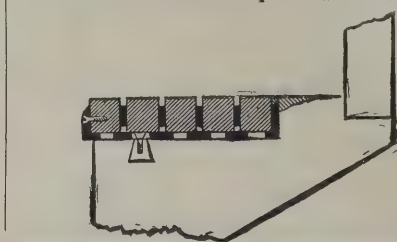
### FOR EVERY DESCRIPTION OF STAIRCASE.

**T**HIS Patent is an improvement on the well-known wooden block construction, and its speciality is that the wooden blocks in each Tread can be removed and transposed so many times that it is almost indestructible besides being noiseless.

No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.



In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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# The Architect.

## AN ARCHITECTURAL GUILD FOR THE FUTURE.



ATTENTION has recently been directed to the circumstance that the Institute of Architects is just fifty years old. Perhaps it may have occurred to some of its members and friends that a modest demonstration might have been indulged in to celebrate the event. In fact, now that we think of it, there was a sort of proposal published by authority—such authority as there is—at the time the recent conference of architects was being organised, to the effect that the fiftieth anniversary of the foundation of the guild should be duly taken into account in the programme. But nothing came of this; we cannot tell why; perhaps such a critic as Sir EDMUND BECKETT, ex-honorary associate, might suggest that it has only gone characteristically enough to form one more tessera in the great pavement of good intentions that underlies the world of human action and inaction.

Sir EDMUND BECKETT is a personage of quite sufficient importance in the English architectural sphere to render his resignation of the honorary membership he held in the Institute an occurrence that cannot be ignored. Indeed it is an incident that shows at once the weakness of the Institute and its strength; its strength in so far as it was able to command the allegiance of this gentleman at all, and its weakness in so far as it is not able to retain his homage any longer than he pleases. Sir EDMUND, we are sure, is good-natured enough to excuse us if we say that he belongs most eminently to the class of people who are "kittle cattle to shoe"; and the Institute may well be proud of being able in any way to say it had once shod him, even if it has to confess that he embraced the earliest opportunity of kicking himself free from the encumbrance. But it is only as a sign of the times—coupled, indeed, with a good many others—that we wish to regard the rebuke to which the Institute of Architects has been obliged to submit at the hands of the distinguished, if unruly, amateur. For when he emphasises his attitude by giving his reason for it, he states a case which it would be idle to pretend that the profession could lightly pass by. Sir EDMUND BECKETT does not always weigh his words in a fair balance, especially when he is pleased to utter them with the rough side of his tongue; but, in the present instance, what he alleges only too plainly is only too intelligible to everybody, whether true or not, namely, that the Architectural Guild of England, after fifty years' work, has ceased to represent the advancement of Architecture, through having allowed some other and inferior interest to obtain the command of its resources. And here we may fortunately break away from the challenger if we accept his challenge; in other words, it is not necessary to pursue in any way the personal quarrel, even if it seems to be an unavoidable duty with all who have at heart the highest honour of the architectural profession to inquire how far the accusation which is involved is a serious one. Furthermore, when even admitting this, we need not propose to go into the question of what the Institute is, or has been in the past, so much as to ask our readers to consider for themselves what it ought to be—or something else in its place—for the future. It is enough for us to remember that the architectural world of fifty years ago and the architectural world of to-day are so entirely different as we know them to be.

The condition of the profession of architects in England in this year 1884 is both honourable and prosperous, although no doubt it has its own difficulties to contend with. In numbers it has increased so largely that the professional administration of building, regarded as a luxury of social science, is at the command of every community of moderate importance in the kingdom. To put such a proposition plainly, there is perhaps not a town or district of any consequence in England—and Scotland and Ireland are only a short way behind—but has its architectural business in the hands of men who have been more or less regularly brought up to the work as the pupils of professed architects, and a large proportion of whom have in

fact enjoyed the advantage of study either in London or under London influence. The effect of this is that the business done all over the country has come to acknowledge a high standard of quality. Not only is the task of administration performed with an efficiency which was unattainable by the promoted clerks of works and retired builders who fifty years ago formed so large a proportion of the "architects and surveyors" of ordinary practice, but the act of artistic design itself has become everywhere alike animated by both knowledge and skill, so that it is quite impossible now to draw a line between metropolitan work and provincial, or to recognise any necessity for applying to headquarters because of local deficiencies.

In such circumstances it is plain that we now have a very large body of well-educated men distributed pretty equally over the whole of the country, whose most important interests are bound up together in the welfare of a vocation which every one who has any understanding of it must acknowledge to be singularly well calculated to unite high-minded brethren on ambitious ground. The practice of architecture in fact, as has often been pointed out, combines in a way that is quite unique the exercise of qualities that in other professions are almost at variance with each other. The imaginative designer, the scientific calculator, and the commercial administrator, are all united in the architect; and if this tends in many cases, as no doubt it must, to bring about internal diversities of doctrine and practice, much more must it have the effect, under liberal influences, of creating a broad platform for the cultivation of elevated sentiment and honourable conduct. More especially, when it is borne in mind how grand are the traditions of architecture throughout all the world and all the ages, may such a brotherhood be expected to stand almost quite apart from other bodies of men of business, men of science, and even men of art; and this still more notably in England, as the country which more than any other in this generation represents the combination of the intellectual attributes of mankind on the most practical ground.

To come at once to something like proposals, we may assert without reserve that so peculiar a profession of men as the architects of England must find themselves of necessity associated together in a grand fraternity. Other agencies there may be, and probably in our very free country must be; but the one central agency cannot be dispensed with. Now there are two principles upon which it may be grounded—namely, that of the commercial union and that of the learned society. The union is a combination for united action in the promotion of the interests of the members as against the general public. The learned society is a combination for the simple service of a great public cause on behalf of the country and the world. In theory this distinction is clear enough, but in practice it is even more clear. That the personal interest of the members collectively may be superficially identifiable with the impersonal interest of the cause which their combined action represents, we may admit; but it is when the personal object is the only object that the whole purpose descends to a lower level. The purpose of an English architectural guild ought strictly, and in the first instance exclusively, to be the advancement of architecture—architecture administrative of course, but architecture scientific no less, and architecture artistic most emphatically of all, for this reason if for no other, that art must ever demand the most delicate handling and the most generous deference. That the literature of architecture must take a very prominent place in the whole scheme of enterprise must never be forgotten, although it need scarcely be urged; and that the maintenance of high-minded principles of practice in business should be constantly kept in view is but an inevitable act of grace.

At the same time, even if we were to take leave—as few if any would refuse to allow us to do—to exalt to the utmost this view of the question, it must certainly be acknowledged by all men of business in these business-like times that the practice of the business of an architect ought to be made the bond of a special combination for the promotion of professional interests; and here arises a certain difficulty. We may admit that a considerable proportion of the great body of practising architects must be regarded as having less interest than other brethren in the higher matters of artistic, scientific, and literary work. There must of necessity, therefore, be a "union" in some degree separable from the learned society or "academy." Can these two be one, nevertheless? For our own part we will not attempt to answer this question—at least for the present; but we commend it earnestly to our readers.



One thing we may say : if the "union" is to constitute—as is not unlikely—the basis of the "academy," the leaders of the one interest must not be leaders but followers in the other. Probably the votaries of the purely academical object will never be too much disposed to claim leadership in the union action ; but we are not so sure of the disinterestedness of certain classes of most worthy men of affairs, whose control over either art, science, or literature might be disastrous, but whose surrender of their accidental claims upon such control might be less cheerfully accorded than we could wish.

## ACROSS THE CAMPAGNA.

[FROM A CORRESPONDENT.]

SPRING-TIME in Italy is a joyous season, seldom interrupted by those chilly and disagreeable retractions which often in more northerly climes make the term but a name. When winter takes his flight he goes for good and all, and spring follows in his train heralded by the songs of birds, strewing the way with opening flowers. The hillside is hoary with almond blossoms, a green fringe mantles the expectant branches, the air is limpid, the sky is clear, and the bright sun pours his beams liberally over all. At such times the mind turns naturally to the country. A longing possesses the soul to be in the fields, to bathe in the fresh atmosphere, to escape from busy streets and crowded thoroughfares, vehicles, and houses. Even in Rome, which combines so many of the qualities of town and country, the same longing comes over one, as though it said—"Leave all these ; go to the lakes and mountains ; breathe freely for a few days, and come back refreshed and brighter for the change."

It was in obedience to such a voice that I went recently in company with two friends across the Campagna for a short sojourn to the Lake Bracciano. This lake, with the three or four little towns situated on its shores, is twenty-six miles from Rome in a north-westerly direction. It is comparatively rarely visited by foreigners, as it cannot be taken on the road to any other important place ; and, it must be confessed, is secondary in its claims to many of the sites and towns which lie in the contrary direction from Rome and amongst the Tusculan and Sabine hills. But for that very reason it may have an attraction for those who seek more unhackneyed and less frequented spots. It is said that Sir WALTER SCOTT, when visiting Rome, made this one of the first goals of his journey. It certainly has a romantic interest of its own, though not perhaps deserving such a preference.

Starting out of the Porta del Popolo along the Via Flaminia, the road branches off to the left, and joins the Via Cassia beyond the Milvian Bridge. As the ascent is made up to the table-lands of the Campagna various views of the city present themselves, now emerging into scattered extension, and now hidden by the swelling bluffs. As we enter the open plains of the Campagna, an old sepulchre, without any reason for it, called that of Nero, at the roadside marks the boundary of the visible ruins of old Rome. Little or nothing on this side of the city bears witness to the vitality and opulence of the past. Its monuments, if there were any, have decayed ; its structures, if they existed, have fallen to the dust. Bare, long stretches meet the eye in every direction ; sloping hollows in which the shepherd attends his flocks, or in which peaceful cattle browse lazily.

About nine miles from Rome, La Storta is reached, from which a branch road leads to the site of the ancient city of Veii. The modern hamlet called Isola Farnese, which marks its position, though it only covers a small proportion of the ground it occupied, is built on the volcanic tufa of the district, which is filled with black cinders, as if newly come out of a furnace. It is a miserable place, and the misery was increased at the moment of my visit by a recent fire, which had burnt many of the inhabitants out of house and home.

This would not be the place to dwell upon the history of Veii, the old Etruscan city which played so important a part in the past that it was once seriously deliberated by the Romans, after BRENNAN, the Gaul, had reduced their own city to ruin, if it would not be desirable to transfer its site to that of the ancient Veii. Its legendary history is well known, and the fable of its fall by Roman astuteness and ingenuity. What remains of it is not very much, and every year it is becoming less and less. It is as if nature were jealous of the long rule

of the past that she now makes haste everywhere to hide its monuments and cancel its records, either by the inroads of a new civilisation, or the progressive decay of all traces of the old one.

Still, however, there is something left. The deeply-cut roads which led up to the city, marks of the gateways in the grooves of the rocks at each side, the tunnelled cutting to allow the passage of the stream known as the Ponte Sodo. More important than these is the fine Etruscan tomb opened by CANINA in 1842. The entrance through a narrow passage cut into the rock is guarded by lions carved in stone. It consists of a double chamber, the roof of which is sculptured out of the solid rock, with beam and rafters, supposed to represent the interior of an Etruscan house. The walls are painted with singular grotesque figures, and several painted vessels are left in the tomb as found. When the tomb was opened a human skeleton lay on either side of the doorway, which soon crumbled to dust. One of them wore a helmet, which is still there, pierced by a lance-thrust and gashed with a sword-stroke, wounds which probably caused the death of the wearer. It is thought the other may have been the wife of the warrior, but no name or description was found in the tomb. DENNIS and other archaeological authorities consider this to be the oldest known Etruscan tomb, and think that it may be coeval with the foundation of Rome ; perhaps, indeed, of a still earlier period. Other remains of sepulchres are seen. Some fragments of the walls of the city are still discernible. On the site of the Roman settlement or colony after the subjugation of the city were found the colossal heads of AUGUSTUS and TIBERIUS, now in the Vatican. This site is marked by the ruins of a Roman columbarium. The area of the arx, or citadel, is pointed out, and still retains the traditional name of the Piazza d'Armi, but there is nothing left to indicate it as such. The fine columns which now ornament the Piazza Colonna in Rome were taken from Veii, and may have belonged to the forum or to a temple. Others were used in the building of St. Paul's without the walls.

Leaving the site of this ancient city, its wooded ravines, its heated atmosphere, its dirt and squalor, our journey was prosecuted until we came within sight of a solitary campanile rising desolate and lonely in the Campagna, a little removed from the road. It indicated the deserted town Galera, round which flows the Arrone, an emissary from the Lake of Bracciano.

This little town dates from the eleventh century and was a possession of the ORSINI family. It is supposed to occupy the site of the ancient Roman station Careiæ. It is interesting from its picturesque situation and condition, and remains a monument of the adverse influence of malaria, which caused the inhabitants to abandon it in the early part of the century. It stands on an eminence at the side of a ravine, at the bottom of which the river flows. The desolation of the spot seems to be increased by the continual and monotonous murmur of the waters as they force their way amongst the boulders and broken masonry which choke the bed. The town—or what was once the town—is entered by a gateway, over which are sculptured the ORSINI arms. On the brink of the precipice rises the campanile almost intact. The rest of the town is entirely in ruins ; roofless houses and other buildings, some almost level with the ground, others half hidden in rank vegetation, which grows up luxuriously everywhere. At one of the angles of the town may be seen the stronghold of the ORSINIS, once powerful rulers in this district, built of brick, the masonry still holding firmly together. Many of the walls are overgrown with ivy which hangs from them in funereal plumes. The streets are hardly now distinguishable. The bat hides in the homestead ; the snake and the lizard occupy the threshold. Overhead the falcon soars and wheels, poised on expanded wings, in perfect flight, as if to illustrate the very poetry of motion made without an effort. Some recording sketches furnished us with memorials of this forlorn and desolate spot.

Again our way lay over the bare Campagna, here hardly marked by a tree or hut, until Bracciano made its appearance before us.

Situated on a height, it commands a view of the lake and the surrounding country. The little town is surmounted by a huge castle, whose lofty walls and battlements seem to overburden the town with their dark and solid masonry. The castle was built by the ORSINIS in the fifteenth century. It is constructed on the plan of a pentagon, the longest side of



which faces the town. Two fine towers are connected by a machicolated wall on this side, whilst the side facing the lake is rendered imposing by three other towers of a similar character. It is surrounded by bastions, and has been defended by a moat, the bed of which is now occupied by peaceful orchards, in which flourish the vine and the fig-tree. It is entered by a double gateway. The interior court is now occupied by various erections, which have destroyed its former character. A beautiful outside stone staircase, however, still distinguishes it.\* A carved and painted wooden roof covers this structure, supported by very graceful columns. The interior does not contain anything remarkable beyond a few family pictures, and some wall decorations of no artistic value. It has suffered modern restoration and adaptation, though I believe it is little used by the ODESCALCHI family, to whom it now belongs.

The town itself has not much to interest the visitor, though there are picturesque points to tempt the artist's pencil. The cathedral church is modern, and occupies a commanding situation. Into this church I entered at the hour of Ave Maria. It was occupied by a congregation, chiefly women and children, who were chanting a litany. The scene was a poetic one. The alternation of the voices, the gathering twilight, the glimmering of the candles, and the general air of mystery and devotion, produced a soothing effect on the mind. A raised platform was erected at one side of the aisle for the *Quaresimale*, or Lent sermons, preached at this season. A crucifix was set up beside it, under which was placed a picture of the MADONNA, with two candles burning in front of it. Presently a priest ascended the platform and began his sermon. It was on the duty of confession. After some preliminary remarks, he introduced a story, not, as he said, for the purpose of amusement, but in illustration of his theme. "A missionary," he said, "preaching on this subject, noticed a man in the background who appeared to be much affected with his sermon, so much so that he was weeping violently. When the sermon was ended the preacher went to the man and besought him to make confession of the sins which troubled him, and so obtain pardon through the means of the Church. The man replied that he was not weeping for his sins, but because his ass was dead. 'I loved him,' added the man, 'like a brother, and he had a voice as sweet as your own.'"

"But you," said the preacher, turning seriously to the congregation, whilst a titter pervaded the church, "do not weep because your ass is dead, but weep because your soul within you is dead to the grace of God."

An appeal so familiar and human could hardly fail to make an impression on his hearers.

The town of Bracciano has no ancient history, though it took a busy part in the social and civil broils of the Middle Ages. In the contests of the COLONNAS with the Popes in the fifteenth century it suffered siege and sacking. The lake is a volcanic basin about twenty miles in circumference. This large sheet of water presents a picturesque view to the traveller; it is surrounded with low-lying hills, over which is seen the far Ciminian range with some snow-peaks in the distance. It was the Lacus Sabatinus of the ancients, and appears to have been kept as a huge fishpond artificially stocked with fish. There are two or three little towns on its borders, one of which, Vicarello, I visited, which contains remains of antique times. It was the ancient Aquæ Apollinares, as fixed by M. DESJARDINS from a number of dedicatory inscriptions in honour of APOLLO which were found there. In 1852 a large number of copper coins and some silver vessels, votive offerings, were found in the reservoir belonging to the ancient baths, which are now preserved in the Kircherian Museum in Rome. The hot springs are still in use. Trevignano, another of these small towns on the borders of the lake, has been identified as the site of the Roman station Sabate, from which the lake took its name. There are legends of an ancient city swallowed in its depths, and still fishermen are reported to see at certain seasons walls and towers dimly gleaming through the intervening waters. The volcanic nature of the situation might have rendered such a catastrophe possible.

The winter visitor to Rome might do worse than make this one of his excursions from the city. In the winter, though, it ought to be; for it is said to be anything but healthy in the summer, owing to the prevalence of malaria in the neighbourhood.

## NOTES FROM PARIS.

THE old Gothic church of St.-Merri, in the Rue St.-Martin, is not often visited by tourists. From the earliest days of Christianity in France a church stood on the site, although no part of the present building appears to be older than A.D. 1520. The adjoining buildings have been allowed to encroach upon the church to a remarkable extent, but the porch is visible, and forms a contrast with the plainness of the interior. What with encroachments and neglect, part of the building is unsafe, and money has been voted by the Municipal Council to remove the tower. The groining in some of the chapels is stained with the wet which passes through the roof. The church is worth a visit, as it suggests the battle of the styles. The sanctuary is Renaissance, having been transformed by means of marble casing. On some of the piers the covering has not been carried up for the whole height. The arches in the chancel are on one face elliptical, but in the chancel aisles we can see the original Gothic contours, and can judge of the change which was accomplished by means of slabs of marble.

It is possible that the roofs of other churches would be the better if they were more often inspected. The Panthéon or Church of St. Geneviève is to a great extent a municipal building, and therefore should be in a good condition. But during one of the late thunderstorms the writer observed that the rain found its way through the roof, and in a short time the pavement was wet. There have been settlements in this church which must injure the outer covering, and originally the superstructure was made too heavy. On that account there ought to be an examination of the roof once a month. If the rain enters in one place it may in another and destroy the frescoes. As the secular authorities have so much to do with the church, is it a stroke of policy that allows so much frippery to remain about this building? It may not be generally known that the heavy crimson-and-gold curtains, which envelop the grand altar, are only scene-painters' work, constructed of boards and canvas. The stalls, which at a distance appear to be good examples of joinery, are also sham, being made of the same flimsy materials. The clergy for their own sake ought to take steps to have the drapery and stalls removed, for bare walls and plain chairs being more honest would be more appropriate.

In about a week the lottery for the schools and museum in connection with the Union Centrale des Arts Décoratifs will be closed, and for a fortnight there will be anxiety amongst the millions of ticket-holders, to be followed by the usual disappointments. The prizes vary from 500,000 frs. to 500 frs., and a total sum of two millions of francs will be distributed. It will be said that lotteries do more harm than good, and in France all schemes connected with them are rigorously scrutinized before tickets are allowed to be issued. But after all what is the loss of a franc, and how many art institutions in England would be improved if funds could be obtained so easily? The Decorative Arts Society is worthy of the support of all France. Hitherto it has derived but little aid from the State, and yet the collections in the different departments are of much value from the broker's point of view, while every example is of a kind that is likely to be suggestive to the artist. The hard-working council have done so much and wish to do more, but money is essential, and the lottery is the most eligible way to raise it. Paris no longer has the monopoly of art workmanship; and it is feared that foreign rivals in England, Germany, Italy, and Russia will become stronger, and secure a still larger share of the world's patronage. Hence the anxiety to establish schools and museums which are to be restricted to the application of art to industry.

The existing Museum of the Union would be attractive and profitable to the art student if it contained nothing more than the collection of sketches and studies which have been presented by M. Galland. They represent half a century of work. When an artist has been selected to paint a part of the walls of the Panthéon, he has obtained the blue ribbon of his order, and M. Galland's position is determined when we say that he has been one of the privileged few, and that his pictures will be hereafter compared with those by M. Cabanel, M. Bonnat, M. Laurens, and M. Puvis de Chavannes. In the collection which is in the museum it is possible to trace the steps by which so much greatness has been attained. M. Galland's principle has been to do everything in the best possible way, and if anything he is too fastidious in

\* See Illustration.



judging of his own work. We can see that with sketches of simple things which were made long ago as much care was taken as if they were elaborate engravings. His dissection of plant forms would delight a botanist, and the artist lingers lovingly over a flower until he has discovered its suggestiveness to him as a decorator. A bit of ribbon is twisted into spiral, and becomes a study for contours and light and shade, which requires skill to complete. M. Galland, following the Venetians, delights to make architecture one of the principal features in his decorations. The studies show that every line in his buildings has been determined accurately by rules of perspective. We find, in a word, that a man who was endowed with genius of the highest kind has toiled patiently over details, and in this way a style was formed which is always recognisable, whether the subject is the human figure or conventional ornament, by its beauty and its truth.

An exhibition which is pretty sure to attract crowds has been opened in one of the salons of the Louvre. The sums paid for admission will be applied to technical schools, especially those for metal-workers. The principal attraction is the case containing the Crown jewels, but the exhibition also represents work in various metals, from children's watches which are worth less than a sou to tiaras which have been made for princesses and the wives of American millionaires. It is proposed to sell the Crown diamonds, reserving those which possess an historical interest. They are seen in so many forms—coronets, necklaces, belts, brooches, swords, combs, watches, stars, orders—that the eye becomes dazzled, and it is difficult to realise how much money the contents of the case are supposed to be worth. There is one necklace of pear-shaped pearls of unsurpassed beauty, and a diadem of pearls and diamonds arranged in exquisite style. An epitome of French history would be given if the stones had tongues. One watch was a present to Louis XIV. from the Dey of Algiers; a figure of an elephant was a present from Mazarin to the king. A brooch was remounted four hundred years ago; a belt is a copy of one worn by an actress in a burlesque, and which attracted the ex-Empress. *Vanitas vanitatum!*

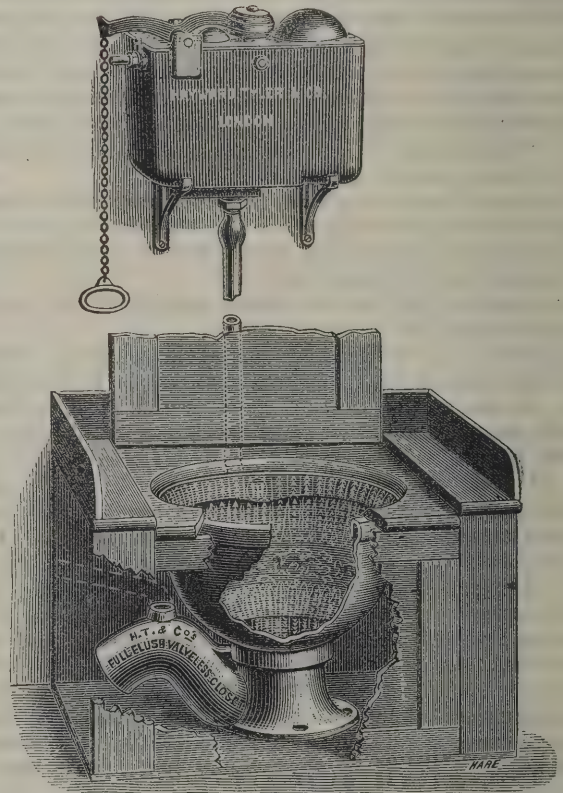
The room in the Louvre is not large; the cases of exhibitors are therefore small, and in some cases inadequate in size. A better notion of what is done by Barbedienne in reproducing ancient and modern statues can be gained from gazing at his shop windows. M. Bodart shows some excellent work in hammered iron; there are modérateur lamps well mounted by M. Victor Lacroix, and beautiful enamels by M. Charles Jean. The bronzes, by MM. Thiebaud Frères and Gautherin, hold their own against many rivals. A case is devoted to theatrical jewellery, while near it is one containing deceptive reproductions in plaster, by M. Caussins, of famous works in bronze, silver and ivory, which merits the attention of art schools. There are some cases of valuable jewellery, and it may be worth noting that M. Fouquet has for his ornaments revived the system of employing gold to a great extent in combination with diamonds.

## THE INTERNATIONAL HEALTH EXHIBITION.

WE regret to state that the unpreparedness visible at the opening of the exhibition is still painfully apparent in many instances; and unfortunately this happens to be the case with several of those that we had singled out for our primary descriptive notices. We shall leave our medical and hygienic contemporaries to discuss the relative values of the foods and drinks, of which latter there is a goodly display, from natural waters to rare old port, and to those journals who are supposed to represent "society," the description of the dress both for men and women that is collected in the eastern and western quadrants, and following the catalogue in consecutive order, we shall take the "Dwelling-house" from which to commence our first notices, and so far as circumstances enable us, take the exhibits of note *seriatim*. The class in which the dwelling-house is commenced is XX., and it embraces no less than eleven classes of material objects, without counting that in which the diagrams are shown. Starting in the central gallery, we find Class XX. is devoted to dwellings, models and designs for the same, and specimens of buildings erected in the grounds; fittings and accessories for dwelling-houses, and completely-fitted apartments, and when the latter are finished there will be much of interest to examine.

Messrs. Hayward Tyler & Co.

At Stand 510, eastern annexe, Messrs. HAYWARD TYLER & CO. have a small but comprehensive exhibit of their specialities in sanitary appliances. Cisterns for the prevention of water waste, as connected with closets, have of late attracted considerable attention amongst waterworks engineers, and very many have been introduced for that purpose. We have the large double-box cisterns, more or less complicated, and somewhat bulky and expensive, and in contra-distinction the single box, which possess an advantage on the ground of expense, but have often failed to secure the approval of the water companies from certain peculiarities in their construction. It has been considered advisable to have, if possible, a single-box cistern, in which the water should be shut off as long as the lower valve remains open, without any interference with the ball valve. One of Messrs. Hayward Tyler & Co.'s cisterns exhibited here fulfils this condition, and appears to comply with the requirements of the "powers that be" of a water-waste preventer of simple construction and moderate cost. By Howard's patent (the name of the inventor) arrangement of the admission-valve, there is another valve placed in the water-way before the water reaches the ball-valve. This valve closes with the action of the water, and requires to be held open for any water to reach the latter. When the cistern is at rest an arm from the cast-iron lever presses against this valve and holds it open, enabling the cistern to fill in the usual way, but as soon as this lever is raised, and before the bottom valve opens, the pressure is removed from the admission-valve, closing it and preventing the possibility of any water passing the ball-valve, although it remains open. This cistern has received the approval of the New River Company under their recent stringent regulations, and has been largely used over the area of their supply, and elsewhere. It is made as a syphon cistern for wash-out closets, hoppers, &c., and as one with after-flush for valve-closets, and all others that require a charge to be delivered into the pan after the flush has passed. Many other useful sanitary appliances are also shown, such as their cheap valve-closets, which the firm were, we believe, the first to introduce, and their highly-finished valve-closets, with self-trapping



overflow. The waterworks cocks, ball-valves, &c., made by this firm are well known for their excellent quality, and are not only exhibited at this stand, but figure amongst the selection of such appliances shown by the New River Company. In addition to what we have named there is a good assortment of their plank and deep-well pumps, a speciality with the firm, showing good workmanship and great strength in their details. Several first-class certificates and medals were obtained by them at the late Calcutta Exhibition, and the gold medal for their aerated-water apparatus, shown here in the section devoted to machinery in motion in the western annexe.

Silicated Carbon Filter Co.

At Stand 418 is a collection of filters, sent by the SILICATED CARBON FILTER CO., Battersea. The exhibit comprises some very handsome and ornamental designs, the material of which



they are made, in addition to the ordinary stoneware, being marbled china and porous terra-cotta ware. The principle of these filters is very simple, to which the large and increasing demand for them is no doubt due. The salient feature of all of them is that when they require renewing with filtering medium, it can be done by the user without returning the filter to the maker. The whole of the interior is open for inspection and cleansing, and should any of the loose or working parts of stoneware be broken through accident, they can also be readily replaced for the most trifling sum. The firm make special varieties for army and ambulances, ships, infirmaries, &c., and have been used in many Government expeditions.

*Messrs. Jackson & Graham.*

In the south central gallery, at Stand 378, Messrs. JACKSON & GRAHAM, Oxford Street, have an erection comprising three rooms, embracing bedroom, dressing, and bath-room, all communicating. They have been designed in their entirety for the firm by Mr. R. W. Edis, F.S.A., and one of the features that the architect has had in view has been the economisation of space. A more cosy or comfortable suite of apartments could not easily have been conceived; and, although we have heard it said there is a Continental air about them, there is nevertheless a degree of genuine homeliness about them rarely met with except in well-appointed English rooms. The colour selected is enamel white, consequently washable, and so far complying with sanitary conditions. The end of the bedroom in which the fireplace stands has a wood mantelpiece, with drawers on either side, and over-mantel with cupboards, &c. On the one side of the fireplace is an escritoire, with bookshelves above, and on the other side is a double washstand, fitted for hot and cold water service. As these occupy the entire end of the room, and are all connected, they have the appearance of one piece of furniture. At the opposite end is a handsome wardrobe, with bevelled plate-glass panels; and smaller articles of furniture, arranged with taste, help to make up the appointments. The bedstead, a handsome production in brass, is furnished on the German plan with two small beds; and, although we are aware that to the Teutonic mind generally this is the correct manner in which two persons should sleep in one bed, we very much question if it will ever become popular in England, and we fail to discern any advantages from an hygienic standpoint. On the other hand, we see unpleasant features likely to accrue from this dual bed. A terra-cotta non-arsenical paper covers the walls; the long window-curtains are of cretonne of similar colour, and the short ones of Madras muslin. The windows are prettily constructed, having beaded coloured panes at the top, with ventilation well cared for in the lower parts. An archway without a door, protected by curtains, leads to the dressing-room, in which is a single bed. A somewhat quaint fireplace, with inviting cushioned "settle" seats on either side, and an over-mantel, the centre of which is fitted with a novel arrangement for the electric light, fills up one end of this apartment. Facing the window we find another escritoire with bookshelves, &c., and the necessary lavatory appointments, with hot and cold water, as in the principal room. Leading again from this by a similar curtained archway is the bath-room, the principal appointments having been supplied by Mr. Conolly, of Hampstead Road. Here we find one of those complete baths—containing shower, douche, needle, spray, &c.—that has become a speciality with this firm, and that we believe was originally introduced by the father of the present proprietor, and in a partitioned corner is a water-closet, known as the safety-valve. In this closet the water-seal is always secured, and is flushed from a 1½ inch service pipe. The service of water is so arranged that it can be discharged in any direction best suited for direct access to the house-drains. On opening the seat a lid is thrown backward, and on closing the seat the lid in question returns to its place over the pan, and forms a further security against the admission of noxious odours into the house. One very commendable feature attracted our attention in this suite of rooms, and that was the many handy little cupboards they contain. Although very useful, cupboards are not always the most slightly appendage to a room, but Mr. Edis has by some happy effect managed to make them appear more like ornaments than the usual commonplace additions, and we are quite sure they will be highly appreciated—by the ladies at least.

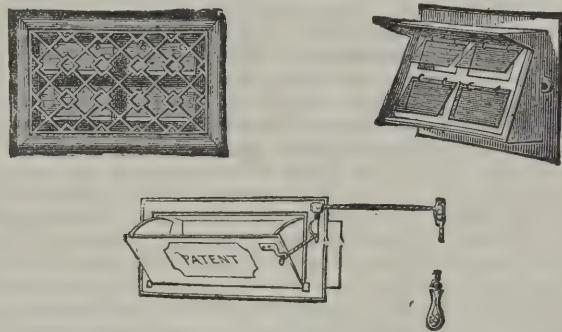
*Messrs. Shanks & Co.*

No. 929, Messrs. SHANKS & CO., Glasgow and Cannon Street, E.C., are another firm in this section who are also suffering from a very limited space, with a result that their stand is anything but replete, the display being not nearly so attractive as the one they annually make at the Building Exhibition, and which has been a satisfaction to *The Architect* to refer to. The "Eureka" combination bath that we have described more than once in our columns is here shown, fitted in most elaborate and elegant oak cabinet work, with Venetian mirror, the use of which is undoubtedly the acme of luxurious bathing. Other baths here shown that are also deserving of special attention are the "Imperial," in wood enclosure, and the "Universal," similarly enclosed; the patent rolled edge Imperial bath, beautifully enamelled outside as well as inside, and requiring no cabinet work. A new feature is a

needle bath, with fittings complete. It is made entirely of nickel-plated copper tubes, fitted to upright supports, which are intended to be fixed to the floor, say of slate, marble, or glazed tiles. It partakes of the character of the "Eureka," but of course possesses no "plunge," so is more adapted for hydropathic establishments and similar public institutions. The assortment of lavatories shown by this firm is for the reasons we have stated not a very large one, but comprises one or two of very elegant design, complete with cabinet stands. Their recently patented "Reliable" syphon cistern and the "Tubal" wash-out closet are shown in action, and form as efficient a combination as can be desired. Slop sinks, lavatory basins, and a host of bath and general hot-water fittings completes this exhibit.

*Messrs. Hayward Bros. & Eckstein.*

Stand No. 710 is the position allotted to Messrs. HAYWARD BROS. & ECKSTEIN, Union Street, Borough, S.E., and it is satisfactory to note that in the great demand for space they have not, like many other exhibitors, been crowded out, for there is probably no firm who has a more legitimate right to representation in an exhibition having the title of the present one. Their exhibit divides itself into two heads, both of which come under Class XXV. in "The Dwelling" group. The fundamental principles of hygiene are to bring about a state of things that shall make the attainment of good health the normal condition, and not merely to provide or suggest remedial measures for existing evils; though it must be understood we by no means deprecate—rather, we appreciate—the numerous contrivances that have appeared and are constantly coming to the front for the latter object. Messrs. Hayward Bros. & Eckstein are one of the few firms who provide the essential requirements and also the remedial appliances. The semi-prism pavement lights of the firm, here to be seen in their various adaptations, will be at once admitted as fulfilling the first object, by directing daylight into basements and underground apartments where it is an impossibility to make its appearance naturally, thereby obviating the necessity of burning gas or providing other artificial light, and so keeping the air as fresh and cool as possible. Hayward's Sheringham inlet ventilator, and Boyle's mica-flap outlet ventilator, as depicted below, form a simple and effectual



method for purifying the atmosphere, either of private dwelling-rooms or public buildings, by supplying a continuous stream of fresh air and carrying off the vitiated air in the least conscious manner. These ventilators are shown at the stand in a variety of sizes, and are arranged so as to give the visitor as clear an idea as possible of their action.

*Messrs. Candy & Co.*

At 497 Messrs. CANDY & CO., of Newton Abbot, and other addresses, make a good display of sanitary stoneware, facing and ordinary building bricks, architectural terra-cotta, and a new sanitary brick. These various goods, which are shown on their stand in great variety, are all made from the celebrated clay, so rich in silica, that is found in such abundance in the vicinity of their potteries at Chudleigh, Torrington, and Bideford. Manufactured of this fine material, the finished article is of flint-like hardness, semi-vitreous, and non-absorbent, and also having a non-poisonous surface; will retain its freshness and purity of colour for almost any length of time even in the soot-beladen atmosphere of the metropolis, where the architectural terra-cotta is finding an increasing sale. It is on account of these peculiar and estimable qualities that the "Sanitary Brick" owes its appellation and has justly received so much favour; and its advent at the present time, when sound and inexpensive material for the construction of artisans' dwellings and middle-class houses is so much sought after, is particularly fortuitous. It can be had either ornamental or plain, and in the latter make is so cheap that there need be no excuse for using the rubbish that too commonly finds its way into the lower class of buildings. The sanitary goods made by Messrs. Candy, and of which specimens are shown, comprise patent exhaust ventilators and chimney-tops, with improvements for creating a powerful up-draught, patent terminals and blowers for forcing fresh air into sewers, drains, &c., and an assortment of highly-vitreous stoneware, sanitary traps, grease-traps, sewer-ventilators, pipes, junctions, &c.



*Messrs. Rownson, Drew & Co.*

Stand No. 387 is occupied by Messrs. ROWNSON, DREW & CO., who are showing Born's patent improved folding lattice-shutter. The idea is quite a novel one, and affords another and most effectual mode for the better guarding of windows and doors of private houses, offices, shops, &c., where space, security, and ventilation is an object, and at the same time providing an efficient and simple means of protection. It is fixed to the window-frame or doorway from the inside, and consists of two wings of equal size, which, when drawn back, are almost hidden from view. Each wing is composed of a number of perpendicular flat-iron bars, crossed by a number of short horizontal ones, strongly rivetted together and placed equi-distant from one another. To facilitate the opening and closing, the principal perpendicular bars run upon wooden rollers upon the window or door-sill. The lattice is fastened on either side of the window or door to be protected, and is locked and bolted in the centre and at top and bottom. They can be made in various strengths, the bars of those shown being  $\frac{3}{4}$ -inch by  $\frac{1}{4}$ -inch, and as they are sent out bronzed or decorated to harmonise with their surroundings, they are in no respect an eyesore or an obstruction, so that they ought to be very generally adopted, as they are undoubtedly one of the most secure appliances of their kind, and would materially impede the efforts of Mr. William Sikes and his fraternity.

*Messrs. Craven, Dunnill & Co., Limited.*

In the east gallery at No. 844 we find the above-mentioned firm from Jackfield Works, near Ironbridge, Shropshire, a neighbourhood that has been rendered commercially historical and prosperous in more than one industry. The firm have been more successful than many exhibitors, and have secured a wall-space 22 feet by 10 feet, and a ground area 22 feet by 6 feet. On this space is massed perhaps as fine a collection of tiles as were ever collected within the same limits, that is to say, when the object has been to show specimens of each class of the production of a firm. At the right hand top corner of the wall-space is a handsome framework containing artistic moulded and enamelled tiles, each pattern having a bordering of dark purple plush to separate it from its neighbour, a plan to be commended as bringing out the pattern of the tile, and avoiding the confusion often visible when a number of patterns are placed together. These tiles are adapted to most uses, such as the decoration of furniture, mantelpieces, grates, and hearths. A fine dado below this is well worth observation. The rich colour effect is remarkably good. In the centre are inserted moulded figure subjects representing poetry and painting, these parcels being enriched with plain and embossed enamelled tiles. To the left of the frame first mentioned are to be seen others containing specimens of ceramic mosaic patterns of good design and colour. We need scarcely remind our readers that this is a branch of their industry in which, if we were to make a selection, we should say Messrs. CRAVEN, DUNNILL & CO. excelled most, though it is scarcely fair to individualise where all is so meritorious; but the successes they have gained in the laying of this kind of flooring, to which our own columns have borne witness, places them beyond cavil at the very height of this resuscitated art, and it is quite unnecessary here to point out the advantages the ceramic mosaic possesses over the ordinary set pattern of the geometric tile, from an art view. Placed along the lower left hand portion of wall-space are some fine slabs for backs and sides of fireplaces, and immediately in front of them, on the ground floor, are arranged several hearths and kerbs. The tiles used in these collections embrace rough and smooth enamelled tiles, Barbotine, hand-painted decorative and electric tiles, embossed and indented, besides tortoiseshell and enamelled tiles possessing rich effect. A handsome framed panel of hand-painted "Barbotine" tiles forms another subject of interest, and one that may be used for some situations in room decoration. A very interesting feature in this display are some reproductions of ancient tiles truthfully copied, such as were used by the firm in Chester Cathedral, Christ Church Cathedral, Dublin, and St. Patrick's Cathedral in the same city, as well as in other noted ecclesiastical edifices in the kingdom. Although there are a large number of other tiles in this exhibit, they are in the main replicas of what we have already described so far as their especial uses are concerned, and it now only remains to us to compliment the firm on the general *ensemble* of their display.

*Mr. W. B. Howell.*

At Stand 381 is an assortment of wicker furniture contributed by Mr. W. B. HOWELL, of Norwich. It comprises the usual things made in this ware, as lounges, tea and work tables, and various easy and other chairs. Considerable taste is shown in the design of some of the latter articles, and the manufacturer has certainly succeeded in treating this material, which it is obvious is difficult to render very artistically, in a manner superior to what is generally seen; and instead of being, as is often the case, an eyesore to a well-furnished room, some of the above would, on the contrary, be an improvement.

*(To be continued.)*

## EDINBURGH ARCHITECTURAL ASSOCIATION.

AT the closing sessional meeting of this Society a paper was read by the president, Mr. MacGibbon, on "Scotch Castles and Houses of the Fifteenth, Sixteenth, and Seventeenth Centuries." After brief allusion to the castles of the fourteenth and fifteenth centuries, he said that at the beginning of the fifteenth century a new style of castle building was introduced, which consisted of buildings surrounding a courtyard, such as Doune and Tantallan. The palaces at Stirling and Linlithgow were well-known examples. During this period, and, in fact, until the eighteenth century, castles and houses continued to be built on the model of the quadrilateral keep, as in the previous period, but with certain modifications which showed their later date. Many of the older keeps were also enlarged into castles with quadrangles after the new style, as at Craigmillar, Crichton, &c. About the middle of the sixteenth century several circumstances concurred to cause a change in the style of domestic architecture. The nobles, enriched by the acquisition of church lands, desired more commodious dwellings. The use of gunpowder rendered the old defences useless, and thus caused them to be abandoned; so that the mansions now built partook more of the nature of domestic than of military architecture. The comparatively quiet reign of James VI. gave scope for housebuilding, while the closer connection with England helped to introduce many new features, both in the arrangement of the plans for providing improved accommodation, and in the style of ornament, which now began to assume the character of the Renaissance. These combined causes led to a new style, which forms the fourth period of Scotch domestic architecture, extending from the middle of the sixteenth century till the complete introduction of the Renaissance, towards the middle of the seventeenth century. During this period the plans both of the tower-built and quadrangle-built castles continued to be on the same general lines as before, but with certain modifications and improvements; but the external architecture was quite changed. Such buildings as Crathes, Castle Fraser, Glamis, Claypotts, Elcho, Craigneur, &c., are well-known examples of this well-marked style. This style is frequently regarded as "French," but the lecturer proceeded to show that this was a mistake, and that the style was of native growth and development. Several of the more important castles were described, showing the improved accommodation latterly introduced, Dunnottar being specially referred to as comprising in one example a collection of the various styles of building employed from the fifteenth to the eighteenth century. After the turrets disappeared, the Scotch style began to yield more and more to the Renaissance influence, although long retaining many of its native features. A tendency to symmetry in the arrangement of the elevations and plans, and the introduction of features clearly borrowed from England, as at Winton House, Heriot's Hospital, Argyle's Lodging, Stirling, &c., soon led the way to the completed Classic works of Sir Wm. Bruce at Holyrood, Kinross, &c.; and the native architecture of Scotland was lost in the all-embracing Renaissance. The lecture was fully illustrated with measured plans and original sketches.

## MR. RICHMOND ON ART.

PROFESSOR RICHMOND made the following remarks in proposing the toast of prosperity to the Birmingham Art School at the luncheon which followed the laying of the inscription-stone. He said that the gentleman who in all probability would have occupied the position in which he now stood had been removed from amongst them, and it must be a matter of regret to them all that he was not present on that occasion. From all he had heard of his character, Mr. Chamberlain must have been one of the most benevolent and charming of men; and standing there in his place he felt but a feeble substitute for him. He would like to have said something about those two munificent gentlemen who had done such honour to Birmingham and such honour to themselves; but all this had been said, and all that was left for him to do was to bring a message from his fellow painters—a message of encouragement to the town of Birmingham and to the School of Art, and a message of confidence that both would fulfil their trust. It appeared to him that the subject of art was very constantly misunderstood; that it was looked upon as an extra in human life, and that it was not sufficiently thought of as a necessity belonging to it. There was no reason why commerce and art should not go hand in hand; and, as he stood there in this great centre of England, and as he was reminded by these gentlemen's munificence of the great days of Venice, of the great days of Genoa, of the great days of Florence, he could put himself back into the position of the early painters, and feel, as they must have felt towards those merchant princes, a gratitude to these gentlemen. Touching upon the detail of the school's work, Professor Richmond said he had learned that there was to be a collection of casts made, and that these were to form some sort of archaeological museum. He had given a great deal of attention to the study of sculpture, and he thought the success of their efforts very much depended upon the



class of work that they chose as examples. Necessarily it would be difficult for them to have a very large collection at first, and he would advise them to take as a beginning only those representative fields of Greek art which were the best understood, and the simplest in their structure and nature. If the gentlemen who were interested in that matter would go to his university—that of Oxford—or to Professor Colvin's university at Cambridge, they would there see two small museums founded, as he thought, upon the exact lines which it was desirable to follow in Birmingham. With regard to the teaching in the School of Art of Birmingham, he needed to say nothing beyond this—that when it was his privilege last February to deliver at the Midland Institute an address to the students, and when previously to that he had looked over all the drawings made for competition to be sent up to South Kensington, he was made aware of the fact that the soil in which they were planting their tree of art in Birmingham was a soil worthy of the labour. They had a magnificent set of pupils, full of intelligence, full of vigour, and without any sign of what so often came into a state of civilisation in a large town—over-luxurious sentiment. It was out of that sort of stuff that the art of all great nations had grown. Art had invariably come out of the lower middle-classes, if he might so say. They were strong and healthy, both in mind and body, and the tendency of their minds was to view things from a healthy and strong point of view; and it was out of this that true feeling came, and out of the reverse that false sentiment was born. He wished to make one remark with regard to the study of art. True art was not copying, but the interpretation of nature. We all saw differently. The true artist was the man who saw most beautifully, and who, as it were, was the prophet of nature, and who by the strength of his vision obliged others to see what he had seen. And this he saw not only with his outward eyes, but with his inward poetic sense, if he might strain the point so far. We all, to use an illustration, saw four ruts in a road where carriages had passed, but it occurred to the poet's and to the artist's mind—perhaps these ruts have been made one by the carriage that is carrying a child to the christening, and another by the carrying of the child to the tomb. It was with this spirit that one should approach art—the spirit of idealism in realism; and he thought that, as a rule, not enough was made of this. We were often led to regard pictures as merely so much form and colour placed upon the canvas, without any association with the theme which they meant to represent. Be that theme ideal, or be it real, it must express something, and it was only by the highest kind of education in art matters that the student would be enabled to express any abstract ideas or to personify any poetical impressions. For the highest form of art the education must be the most strenuous, and indeed it might be said that only those who had learned to realise to perfection could idealise to perfection. In conclusion, it remained for him to wish them prosperity in that great undertaking, to congratulate Birmingham upon the gentlemen who had been so good to it, to congratulate Birmingham also upon its constant love for education and the advancement of its people, and to remind it that there was a light breaking on the horizon of art, which must before long burst into the splendour of a sunny noon.

### OLD ROMAN VILLAS.

THE old Roman villa lately discovered at Woolstone, on the Craven estate, in the vicinity of the "White Horse" Hill, was recently visited by the members of the Oxford Architectural Society. The excavations cover a considerable part of the field; the foundations of the walls are clearly visible, and the principal apartments of the villa identified by the tessellated pavements of beautiful geometrical design with which the rooms are laid. Mr. Parker produced a ground plan of the villa, together with some well executed illustrations of the pavements. A passage of great length, and some minor parts of the villa, had been laid with red tesserae of a commoner description, such as may be seen at Silchester and other places.

Mr. James Parker made some remarks, in the course of which he said that they were assembled on the site of an interesting Roman villa. He was perhaps speaking to some who had not seen more than one or two such villas, while some, probably, had not seen one before. If, however, they had seen three or four such villas they might see a fifth that would differ from the previous ones, as the Roman houses were arranged on different plans, pretty much as were the modern villas that were built in the neighbouring towns. Still, there were certain things common to all of them. It was rather awkward bringing this point in at once, with respect to this particular villa, because, so far as the excavations had gone, one of the things commonly found in Roman villas was conspicuous by its absence. He referred to the hypocaust chamber, beneath which were arrangements of hot-air flues, intended to warm the chamber above, as well, probably, as other parts of the villa. No such chamber had been brought to light in this instance. In the Roman villa at Wheatley the chief part of the hypocaust was found existing, but after the lapse of a day or so, nothing of the hypocaust was to be seen. However, after a good deal of searching throughout the village the missing tiles

were found and brought back to the original spot, and the hypocaust was reconstructed. These hypocausts were connected with chambers that were evidently used as bath-rooms, and they illustrated this circumstance, that when the Romans left their own homes to occupy England, they brought their Roman habits and customs with them. One of the habits of the Romans was to keep themselves warm; they were accustomed to warmth from the nature of their own Italian sky, and when they came to England they found the sky and the weather very different to what they had experienced, and, therefore, one of the first things to do after they had settled themselves down in this country was to construct these warm chambers in their dwellings. Another great feature in these Roman villas was that one of the principal chambers was usually laid with tessellated pavements of an ornamental character, similar to that which they now saw before them. They had evidently found the large room in this villa, but to his mind the most interesting part of the discovery was the little recess which had been disclosed on the southern side of the great passages which ran from east to west. That part was probably 100 feet long at least, and about 8 feet wide, and it was tiled in different places after a different manner. On the south side of the passage was this little recess, perhaps about 14 feet long, and 5 feet or 6 feet wide. What would this chamber be used for? He thought it most probable that it was in this chamber that the household gods were placed, and that this small apartment was looked upon with a certain amount of respect, and was, possibly, more or less connected with religious uses. In this particular instance they found a tessellated pavement of even a handsomer pattern in the recess referred to than was laid in the larger apartment. With the exception of the pavement at North Lye, this was, perhaps, the finest piece of tessellated work that had been found in this district. They might well ask how came it that these Roman villas were found dotted about the country? Not very long ago a Roman villa was found at Frilford. Compared with this, the villa at Frilford was in some respects more interesting, while in other respects it was less interesting. At Frilford the walls were clearly shown, being constructed of stone, and standing in a field of earth and sand. Here the walls were composed of masses of clunched chalk, the field being full of loose chalk. The walls having been thrown down and mixed with the chalky soil of the field, it was very difficult to get out a clear line of demarcation. The question arose, were there any more of these Roman villas in this neighbourhood? There was one near Wantage, and he well remembered Mr. Davey's description of it. The tessellated pavement in that instance was not nearly so fine in pattern as in this villa. It might be asked what did it mean by finding here and there odd Roman villas stationed at distances of seven or eight miles apart? They might compare the Roman occupation of England to something like the British occupation of India. There must have been stations at about even distances apart from each other, near the roads, and sufficiently close to each other, and to a Roman cohort, to be able to communicate and put down any sudden rising. The Roman officers in all probability lived in these villas that were scattered over the country, and under their control and supervision the conquered British were kept in subjection. Then came another curious question: Why was there not a single Roman villa found with the walls above the surface of the ground? One or two reasons for this might be assigned, but the chief reason appeared to him to be this, that when the Saxon hordes came from the south, they seemed to have devastated the country wherever they went, and that what they could not pull down they burnt. They had a striking example of this fact at Silchester, where a great mass of burnt material was met with. In this instance, they had to solve a difficult problem, which had not presented itself in connection with other Roman villas that had been disclosed.

### SCHOOL OF PAINTING IN WATER-COLOURS.

THE first season of the Free Schools of the Royal Institute of Painters in Water-Colours came to a termination on Saturday, when the prizes were distributed to the successful students by the president, Mr. James D. Linton, in the presence of the Council and members of the Royal Institute. In the course of his address, Mr. Linton remarked on the rapid strides made of late years in the art of water-colour painting—an art in which England stood pre-eminent—and pointed out the great advantages the students of the present day possessed over their predecessors. With regard to the oft-quoted remark that it was better to go to Nature than to a teacher, he said that nothing could be more fallacious than such a statement. In the greatest age of art—the Renaissance of art in Italy—students were apprenticed to art the same as to a trade. While complimenting the students of the Institute on the great progress they had made, he urged them to still further exertions during the next season. The prizes were then distributed, the principal prize-winners being Mr. C. J. Fox for figure, and Mr. A. C. Wyatt for landscape. The schools will reopen the first Monday in October.



## NOTES AND COMMENTS.

THE annual congress of French architects will be held in Paris during next week. The proceedings commence on Monday and end on Saturday. As usual papers will be read, and there will be visits to works which are in progress. Among the buildings to be examined are the great church at Montmartre, which is yet far from completion, and the Lycée Jeanson. The sewers are also to be visited, and as compensation there will be an excursion to the Château de Blois. Arrangements will be made for a visit to some manufactory of stained glass in Paris.

THE opening of Wolverhampton Art Gallery on Friday in last week received additional interest from the fact that the anonymous donor of this handsome present to the town consented to his name being at last made public, and Sir RUPERT KETTLE announced that they were indebted to the generosity of Mr. PHILIP HORSMAN (Messrs. HORSMAN & Co., builders), of Wolverhampton. Mr. HORSMAN's account of how he came to build the gallery is this:—"To the rector, I believe, I am indebted for the inspiration to present the gallery. At the opening of the park it was he who suggested that an art gallery was the next thing for the town, and whoever would present it would be its benefactor. For some time previous to this it had occurred to me as a duty to use what I may term my surplus means for the benefit of my less fortunate neighbours. I have considered several schemes, but could not bring my mind to decide what was best for me to do. When the art gallery was mentioned I turned it over in my mind, and I distinctly saw what my duty was, and I made up my mind to set about the work."

A PRIVATE meeting of delegates representing the various Parisian art industries was held in Paris on Thursday to consider the law as it relates to trade societies. Among the trades invited were the carpenters, modellers, turners, tapestry weavers, carvers, painters, metal-workers, and joiners. It is proposed to form a central council to deliberate on questions in which unity is desirable. Many of the trades at the present time are suffering, partly from the depression which apparently is universal, and partly from foreign competition and new arrangements for the division of labour. It is surprising what low wages are often received in Paris by clever workmen, and it is not surprising if it should be supposed that a remedy for their evils would be found in more perfect organisation.

THE Darlington School Board have received in competition eleven designs for some proposed new schools in Beaumont Street, and at a meeting of the Board, held on Thursday week, the General Purposes Committee's report was read, recommending the selection of plans marked "Three R's," by Messrs. CLARK & MOSCROP, of Darlington. After some discussion, however, the majority of the Board decided to adopt the design marked "Hope," as being the cheapest to carry out. On opening the letters of the competing architects, the author of the selected design was found to be Mr. F. W. BROOKS, of Darlington. Mr. H. BROOKS, father of the successful competitor, a member of the School Board, formed one of the majority who voted for "Hope." It is not to be presumed that Mr. BROOKS, sen., had the slightest idea as to the authorship of the designs by "Hope," but the incident will doubtless add another sore to the inevitable heartburnings of the competition system.

THE majority of the eighty-two designs for the GAMBETTA memorial are suggestive of the evil which is inherent in the competition system. If some of the competitors, such as MM. DALOU, COUTAN, FALGUIÈRE, ETEX, LEMAIRE, BARTHOLDI (and many other names could be given), were offered a commission, there is little doubt that a memorable work would be created. Repose is one of the first essentials in sculpture, and it is almost impossible to attain that quality when an artist feels that his design will have to contend with others which appeal to the admiration of the mob. It must be said that the majority of the competitors have not done justice to themselves, or to the subject. GAMBETTA was a great man, but it is hardly fair to suggest that he was the greatest of Frenchmen, nor is it worthy that the building of the Palais du Corps Législatif should be dwarfed by a memorial which would make the statues of *Pro-*

*dence* and *Justice* look like puppets, while COLBERT and D'AGUESSEAU would become insignificant. It may be necessary in the interest of a party to deify GAMBETTA; but it is a pity that art has been made a tool in the process. GAMBETTA had a fine head, but his body resembled that of the normal Paris shopkeeper. It is, therefore, difficult to make an heroic figure of him. In most of the designs he is seen in an attitude that suggests one of his impassioned appeals; in many he clasps the national flag, and some suggest that he performed a feat like NAPOLEON's at the Bridge of Arcole. One artist has a tall column with a bust on the top, and nude figures struggling below. A second shows a statue in a summer-house, and an honest mechanic has sent a model which consists of a water tower, painted with stars, and supported by columns that would carry a reservoir. In another design, which is well worked out, GAMBETTA stands on a shield, which is carried by men representing various classes of the population. Several of the designs have allegorical figures, and in one we see France in danger of falling backwards if it were not for the support of little Cupids. The best designs are those in which architecture has been combined with sculpture, for in them the extravagance of the sculptor is overpowered by the structural lines, and, taken as a whole, the competition is more satisfactory as a test of architectural skill than of sculptural design. The jury elected by the competitors consists of MM. GARNIER and BAILLY, architects, with MM. CHAPU, DUBOIS, and GUILLAUME, sculptors.

THE British Museum authorities, who have been devoting their attention of late to the rearrangement of the Oriental department, have now thrown open a room, that leading to the Assyrian basement, which is devoted to Semitic inscriptions. The interest with which the French Government has taken up this branch of Oriental archaeology induced the authorities of the British Museum to give greater publicity to the fine series of Phœnician, Hebrew, Himyritic, and Aramean inscriptions which have been too long hidden in the vaults of the Museum. The series of inscribed monuments ranges from the tenth century before to the thirteenth century after the Christian era. Casts have also been obtained from continental museums and other sources. The earliest monument is a fine cast of the Moabite stone, as restored by M. GANNEAU. Above the doorway a cast of the earliest Hebrew inscription, that from the conduit of the Pool of Siloam, will be placed. Two cases are occupied by the inscriptions from Carthage obtained by Mr. DAVIS from 1856-58. These inscriptions belong to the later Punic age. In the centre of the room is a marble sarcophagus.

IT might be supposed that after a month the Salon should lose some of its novelty for sightseers. But on last Sunday no less than 34,700 people took advantage of the rule which allows of gratuitous admission in the afternoons of Sundays. On that morning 1,058 people paid a franc for admission. The attendance in the mornings of week-days when the charge is two francs is rarely numerous, but from 2 p.m. until 6 p.m. the Salon continues to be crowded.

ACCORDING to the latest returns, the number of dwellings in France is 8,875,267. During the past year about 124,000 houses have been erected, and the demolitions have amounted to 88,500. It is generally considered that the building trade is not at present in a prosperous condition in France.

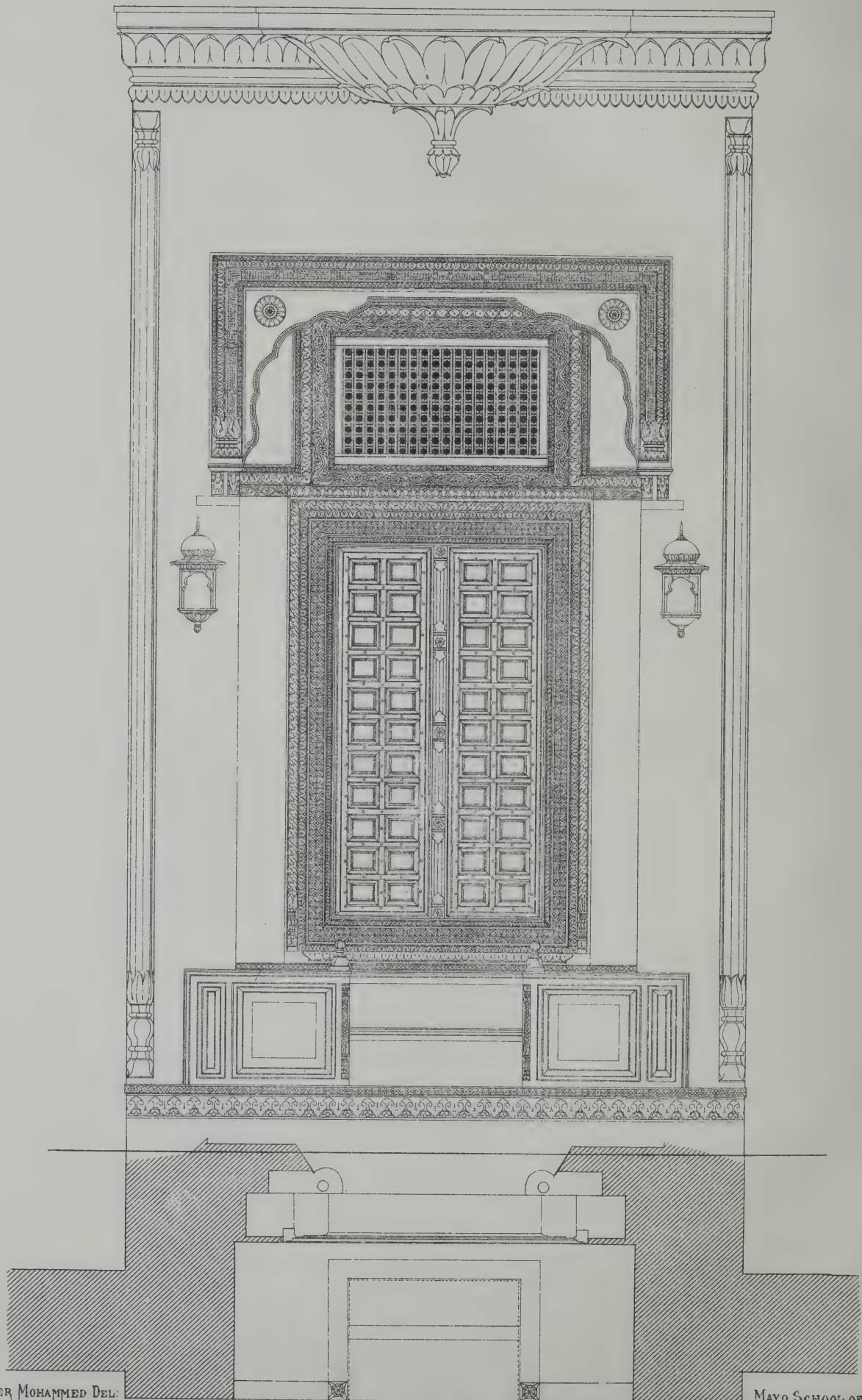
GAS BILLS are a puzzle to many persons from the persistency with which the number of feet of gas consumed increases in the face of economy. Mr. DEACON, of Streatham Hill, has just made some very sensible suggestions which, if put in practice, will secure consumers from having to pay for more gas than has been actually burnt. He says:—"See that the burner is of the size required. All sizes of BRAY's burners can be bought for about a halfpenny each, and any householder can fix them, as they simply screw into the fitting. Have a regulator fixed on the outlet pipe close to the meter; this will prevent the gas being forced through the burners quicker than it can be consumed, and, moreover, insures a steady, uniform light. Where possible, have the old meter removed and a new dry meter of your own fixed in its place. On the index of this will be found a dial showing single feet up to 5. By turning the main tap on while all the burners are off and watching this dial anyone can detect leakage.







ELEVATION OF DOOR WAY DHAMON KI GULLEE  
LAHORE.



SHER MOHAMMED DEL:

0 1 2 3 4 5

MAYO SCHOOL OF ART  
LAHORE.

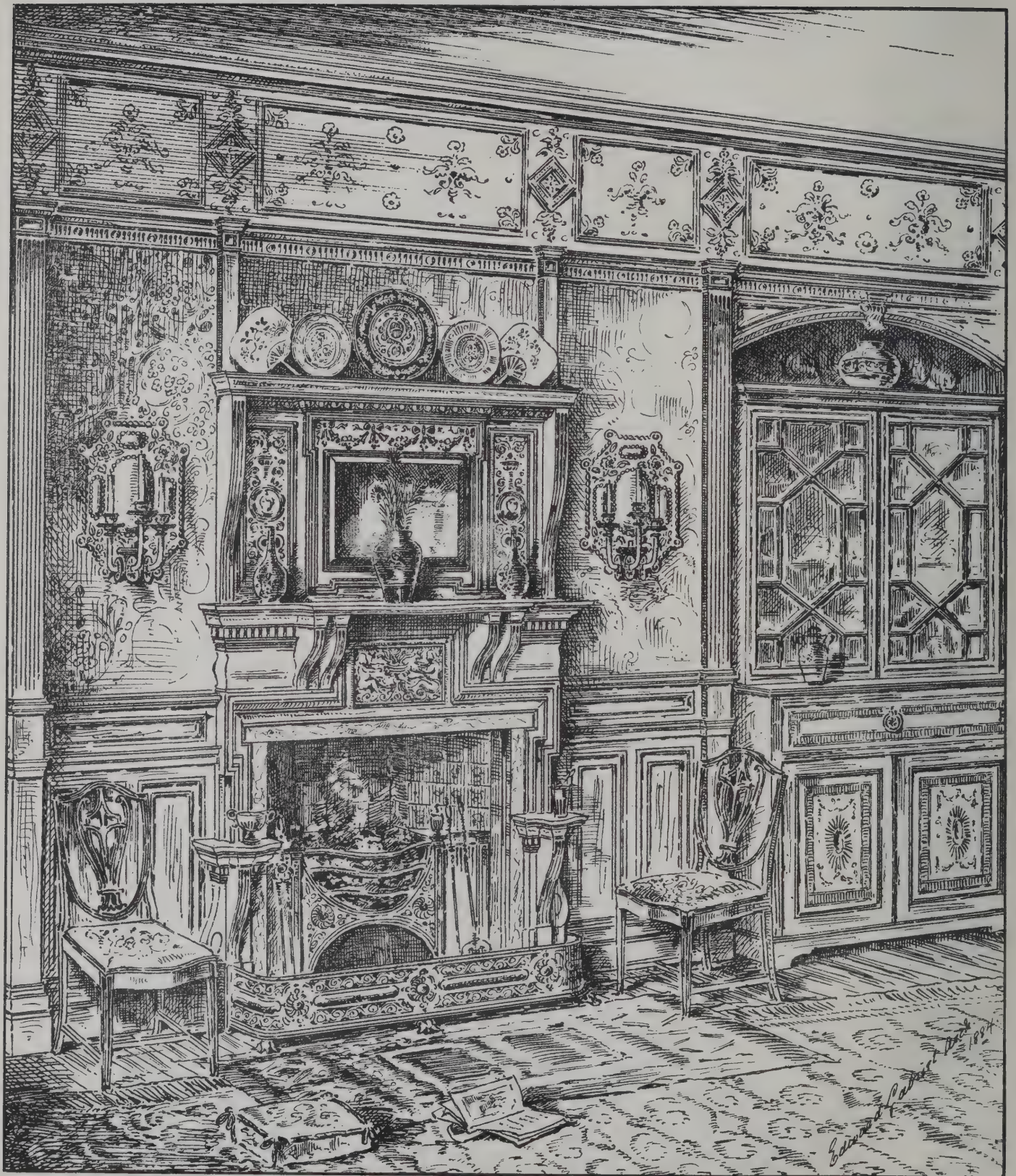
J. L. Kipling  
Principal.







The Architect, June 7<sup>th</sup> 1884.



Sprague & Co. 22, Martins Lane Cannon St. E.C.

## MANTEL PIECE & ROOM DECORATION.

DESIGNED BY EDWARD GABRIEL, ARCHITECT.



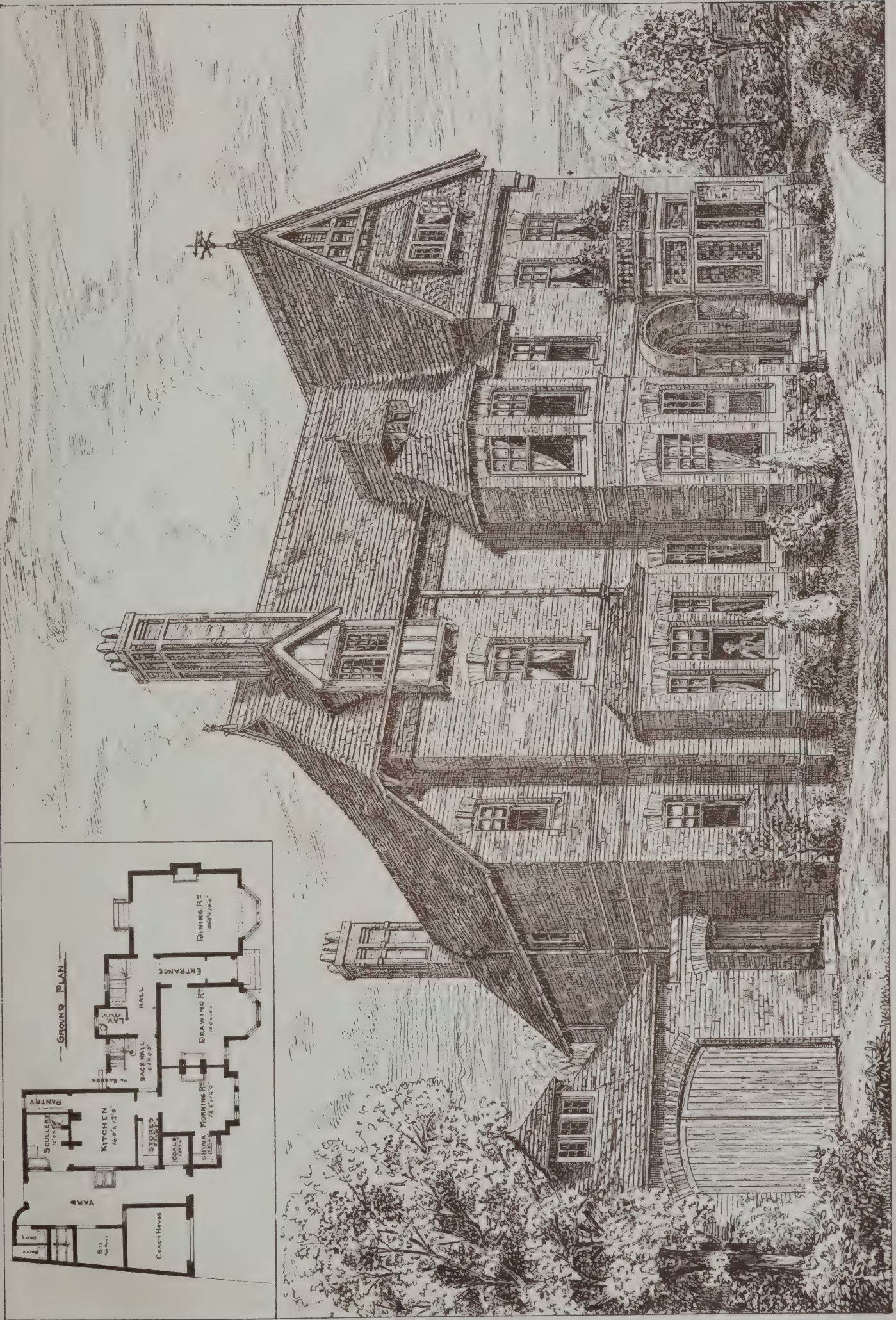
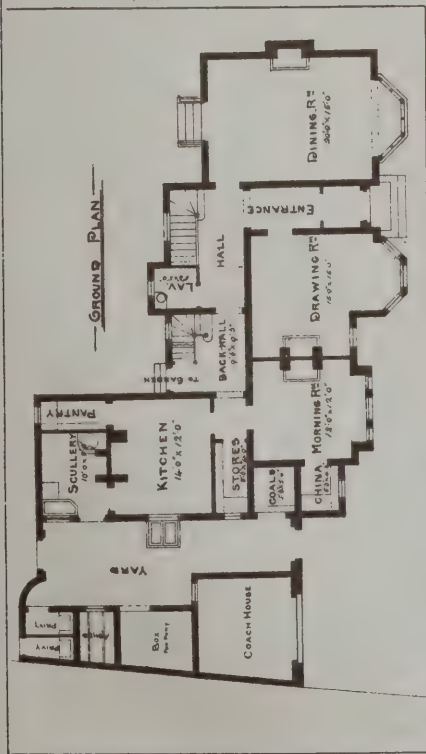






COTTAGE AT MOSELEY, NEAR BIRMINGHAM.  
FOR MRS HOLLIS.  
J.A. COSSINS, ARCHT.





HOUSE AT MOSELEY, NEAR BIRMINGHAM.  
FOR A. GOODE ESQ.  
J. A. COSSINS, ARCHT.









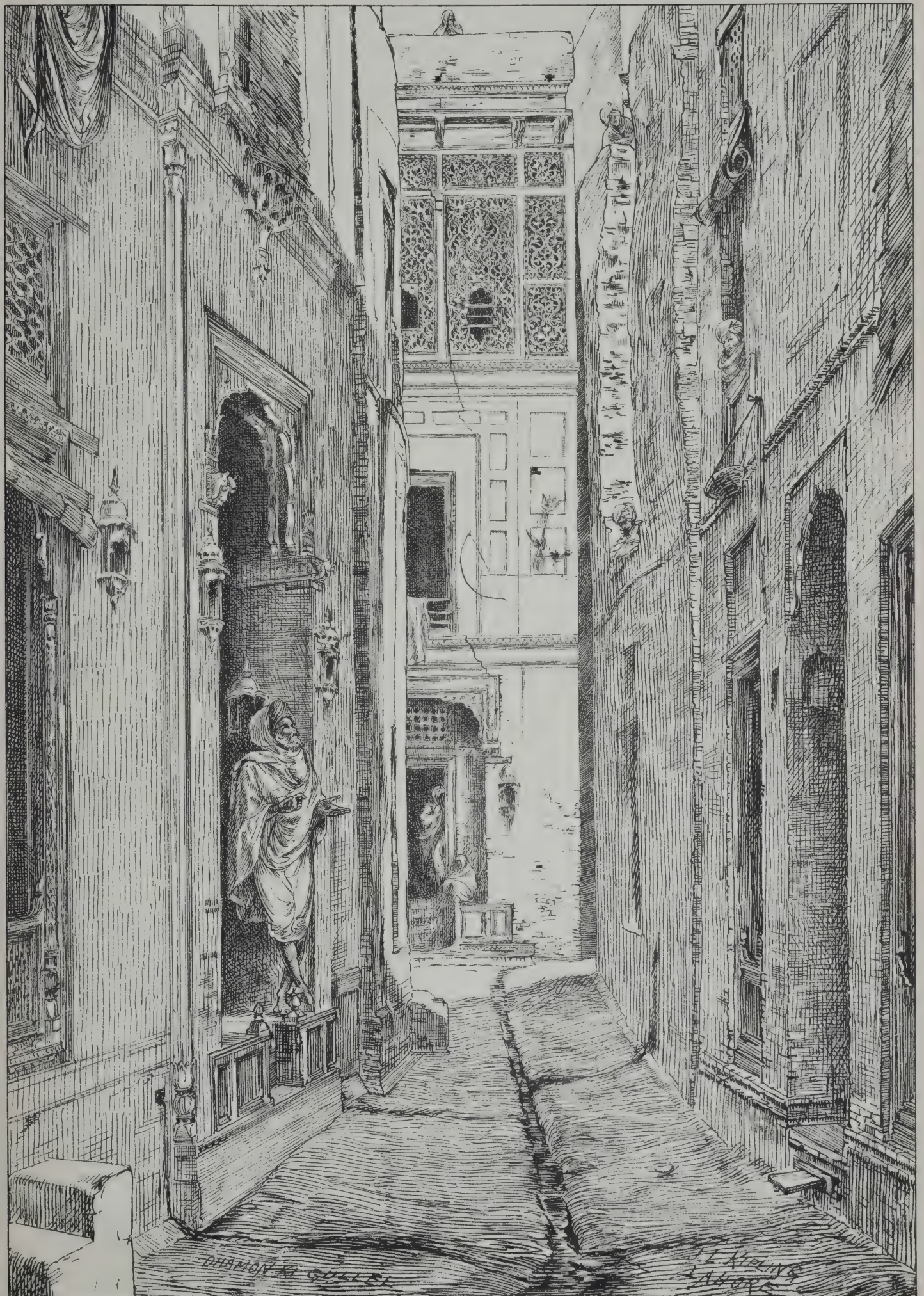
"INK-PHOTO," SPRAGUE & CO., LONDON.

STAIRCASE, AT BRACCIANO IN THE CAMPAGNA.









DHAMON KI GULLEE, LAHORE.

DRAWN BY J. L. KIPLING.







## ILLUSTRATIONS.

HOUSE FOR MR. ALBERT GOODE, MOSELEY, NEAR BIRMINGHAM.

THIS house was built early in last year in the Oxford Road, Moseley, and although on a small scale, possesses nearly every convenience that is usually found in modern houses of a much more pretentious description. The walls are built of red brick, with a  $\frac{3}{4}$ -inch cavity, filled with hygean rock asphalte. The roofs are tiled. The cost was 1,700*l*. Mr. JETHRO A. COSSINS, of Birmingham, was the architect.

COTTAGE RESIDENCE FOR MRS. HOLLIS, MOSELEY, BIRMINGHAM.

THIS small house occupies a charming site overlooking the Bromsgrove and Clent Hills. It has been very substantially built to enable it to resist the violent westerly winds to which it is much exposed, and has hollow walls externally. The cost, including a great length of boundary wall, was about 1,600*l*. Mr. JETHRO A. COSSINS, of Birmingham, was the architect.

STAIRCASE AT BRACCIANO.

THE staircase shown in the illustration is referred to in the article entitled "Across the Campagna," which is published this week.

MANTELPiece AND ROOM DECORATION.

THIS illustration is a reproduction of a design by Mr. E. GABRIEL, architect.

STREET VIEW IN LAHORE, AND DOORWAY.

THE Indian buildings shown are sketched by Mr. KIPLING, who has been exceptionally successful in conducting some of the art schools in India. The geometrical drawing will, apart from the interest of the subject, suggest the care with which Indian artists represent the smallest details.

## THE ARCHITECTURAL ASSOCIATION.

THE last ordinary meeting of the session was held on Friday evening, the 30th ult., Mr. Cole A. Adams, president, in the chair. The annual dinner, it was announced, would take place at the Holborn Restaurant. The following gentlemen were elected members:—Messrs. W. F. Good, J. A. Ashton, and A. W. Cleaver. Mr. C. R. Pink then read a paper, entitled "Notes on Heraldry," which will be found on another page. On the termination of the paper a discussion ensued, in which Messrs. Stannus, Gotch, and Appleton took part. A vote of thanks was passed to Mr. Pink, who acknowledged the compliment, and replied to the various points raised in the discussion.

## Elections for 1884-85.

The list of officers elected to serve during the ensuing session was then read, as follows:—

*President.*—Mr. Cole A. Adams.*Vice-Presidents.*—Mr. C. R. Pink and Mr. W. H. Pratt.*Committee.*—Messrs. Baggallay, Eales, Gale, Garratt, Gotch, Millard, A. B. Pite, Stannus, Stokes, and Turner.*Hon. Treasurer.*—Mr. J. Douglass Mathews.*Assistant-Treasurer.*—Mr. Pratt.*Librarian.*—Mr. R. L. Cox.*Secretaries.*—Messrs. W. H. Atkin Berry and H. D. Appleton.*Solicitor.*—Francis Truefitt.*Assistant-Librarians.*—Messrs. W. Burrell and J. Shelley Birch.*Auditors.*—Messrs. G. A. Pryce, Cuxon, and H. York.*Registrar.*—Mr. T. H. Watson.*Collector.*—Mr. Alfred Hill.

## ROYAL INSTITUTE OF ARCHITECTS OF IRELAND.

AT a meeting of the Council of the Royal Institute of the Architects of Ireland, held in Dublin, and specially summoned to consider the project for the proposed loop line junction railway, the following resolutions were unanimously adopted:—

1. That the President and Council protest in the strongest manner against the needless and unreasonable disfigurement of the admittedly finest architectural effect in the city of Dublin, of which the Custom-House, the grand monumental work of James Gandon, is the principal feature.

2. That, as a practical scheme, architects of experience in the city of Dublin will unanimously condemn the injudicious interference with the ground property of an extensive area as proposed, by a railway crossing several thoroughfares at a shew line, which is manifestly capable of reasonable modification by a shorter and less costly course.

3. That the Institute is by no means opposed to the connection of the railways of Dublin by a reasonably designed loop line, but, on the contrary, is of opinion that such a line is of vital importance to the progress and prosperity of the city. It is of opinion, however, that it should cross the river to the eastward of the Custom-House, and that the sacrifice of berthage to the westward should not be weighed against such a line in comparison with the serious disfigurement of the city now contemplated; and further, that the elevated portion of the swivel bridge, now recognised as also an uncalled-for disfigurement, should be removed at the earliest possible opportunity.

## STUDY OF DRAWING IN ELEMENTARY SCHOOLS.

IN reference to the subject of drawing, the Royal Commissioners on Technical Instruction in their report call attention to the extraordinary efforts which are being made abroad for instruction in art, more especially as applied to industrial and decorative purposes, and to the important influence of this instruction in furnishing employment for artisans on the Continent. Without depreciating what has been done in this direction by the schools and classes under the auspices of the Science and Art Department in this country, and whilst fully alive to the importance of the organisation which tends to the diffusion of art instruction over a wide area, the Commissioners say they cannot conceal from themselves the fact that their influence on industrial art in this country is far from being so great as that of similar schools abroad. This is due, no doubt, to some extent to the want of proper and sufficient preparation on the part of the students, owing to the inadequate instruction they have received in drawing in the elementary schools.

The Commissioners say:—We are aware that the number of children who are supposed to learn drawing in elementary schools is considerable, but it is small compared with the total number in attendance, and it is, we have reason to believe, diminishing. We have ascertained by inspection that the instruction is in far too many cases of little value. Instead of a mass of inferior drawings being sent up once a year to South Kensington for examination there, it is necessary that the instruction in drawing in elementary schools should be as carefully supervised on the spot by the Whitehall inspectors as is that in other branches of primary education. In nearly all the places abroad which your Commissioners have visited they have found that drawing is an obligatory subject of instruction in the primary school, and that it is regarded as of equal importance with writing. The number of hours which the children devote to lessons in drawing abroad is frequently as many as three per week, whereas in England the subject is not only not obligatory, but in about three-fourths of our elementary schools no instruction whatever is given in this subject, and in those schools in which drawing is taught the time devoted to it rarely exceeds one hour per week, and even that not always regularly. This want of attention, together with the absence of competent teachers, proper models and methods, and adequate inspection, fully accounts for the inferiority to which we have referred. The training of teachers for the Irish national schools includes special instruction in drawing, and a grant for drawing is made to primary schools in Ireland by the Commissioners of National Education. The drawing in some of the schools of the Christian Brothers, and in some of those under the Board of Intermediate Education, is good.

We are of opinion that sound instruction in the rudiments of drawing should be incorporated with writing in all primary schools, both for girls and boys, by which also, according to the experience of competent authorities, the writing would be much improved. Something in this direction has already been done in many good infant schools, where children of the age of six draw triangles, squares, oblongs, &c., on their slates. This exercise is repeated on the day of inspection, and is taken into account in estimating the value attached to "appropriate occupations."

We have observed with satisfaction the recent circular of August 1883, prescribing the new exercise of drawing to scale. We believe the principle therein laid down to be excellent, and we trust that the school managers and teachers will avail themselves of the advantages offered to them in this alteration in the first grade work. The permission recently accorded to teachers to give instruction in drawing and modelling to the children of the elementary schools, out of the ordinary school hours, is also likely to prove very advantageous.

We are of opinion that more attention than has hitherto been devoted to it should be directed to the subject of modelling in the elementary school. We notice that by a recent addition to the Art Directory small classes in modelling may now claim a local



examination; we believe this to be a most salutary regulation. Modelling is an exercise of great importance to the future workman, and its rudiments can well be taken up, as in Continental schools, at the earliest age.

Assuming such preparation in the infant and elementary school as we have here suggested, the progress of subsequent instruction in art classes would be immeasurably more rapid. Whether the attendance in any given locality will ever be so great in this country, where the instruction has to be paid for, as in France, Belgium, and elsewhere, where it is gratuitous, is a matter for grave doubt. However this may be, there are two points in connection with the instruction in art schools and classes as bearing on industrial pursuits, which require careful attention. The first is one which we are glad to perceive is now fully appreciated by the Science and Art Department, viz., the advantage of substituting practice in rapid, but correct, execution, in place of the method of stippling, which was formerly not sufficiently discouraged in art schools and classes; greater attention also than hitherto should be given to modelling. The second point relates to industrial designing. This, for a variety of reasons, the chief of which are the want of sufficient knowledge of manufactures on the part of the art teachers, and the absence of sympathy evinced by the proprietors of industrial works, has, with some notable exceptions, not received sufficient attention in our art schools and classes. In fact, there has been a great departure in this respect from the intention with which the "Schools of Design" were originally founded, viz., "the practical application of (a knowledge of) ornamental art to the improvement of manufactures." Large grants of public money for teaching art to artisans in such classes can scarcely be justified on any other ground than its industrial utility.

On the subject of the teaching of industrial design, we are of opinion that the Science and Art Department may with advantage depart from their principle, as at first laid down, of granting encouragement to design only, so far as to award grants for specimens of applied art-workmanship in the materials themselves, as a test of the applicability of the design and as a reward for success in overcoming the technical difficulties of the manufacture. It seems scarcely fair that well-executed art-work by a student, say a richly chased piece of silver plate, should obtain only the same recompense as the design for the same object on paper. We are aware that special vigilance would in this case be required in order to prevent the use of such rewards for trade or for other than educational purposes.

It appears from the evidence, and from a remarkable letter from M. Willms, the eminent designer of Birmingham, that it would be well if persons practically acquainted with the application of design to industrial manufactures were more extensively consulted in the award of prizes for industrial design. We are aware that this is now done in some measure, but, however eminent may be the gentleman whom the department has been in the habit of consulting, it is unlikely that the small number of these should be sufficiently familiar with the vast varieties of "applications" to have the special knowledge requisite for judges in the large number of trades in which design forms an important element.

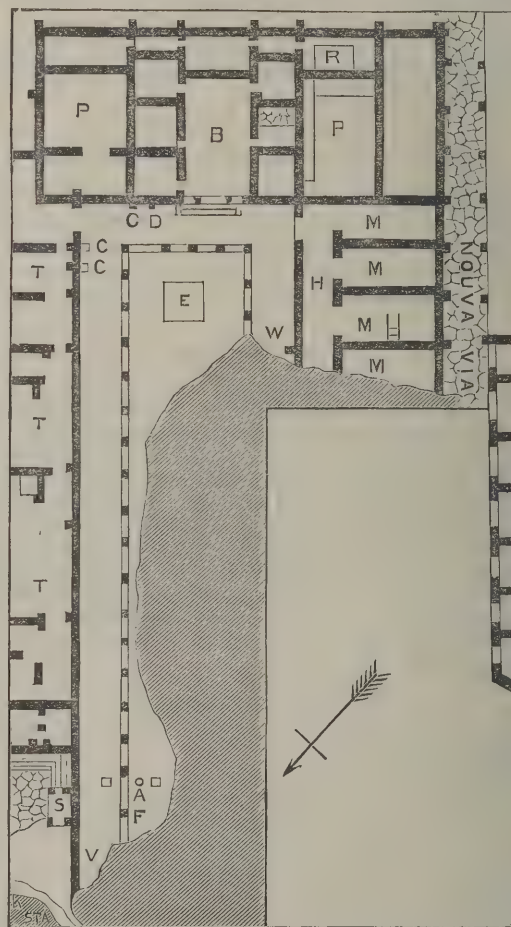
### HOUSE OF THE VESTALS AT ROME.

THE treasure, in the form of sculpture and inscriptions, found in the course of the excavations in the House of the Vestals has, says the Rome correspondent of the *Times*, been altogether unprecedented. The records of the Roman excavations that have come down to us, from the earliest left by Aldroandi and Flaminius Vacca, may be searched in vain for any parallel instance. It is the first time, however, that anything like a sculpture gallery has been discovered, for the Atrium Vestæ, peopled as it must have been with statues of the Grand Vestals, may fairly be considered in that light.

As the works of excavation were continued along the south-west portico of the atrium from the point marked "W" in the annexed plan, no fewer than 16 marble statues in different states of preservation, and eight pedestals of statues, were found within very short distances of each other—in fact, some of them quite close together; and lying among them large fragments of broken columns, pieces of architectural detail, and innumerable bits of wall panelling of various coloured marbles. For more than a fortnight each day's work generally ended with the sight of the head or the feet of another statue, the base of a column, or the corner of a pedestal, projecting from the bank side of the accumulation, to be completely disinterred the next morning. Counting some distinct fragments of statues and the five pedestals found previous to the clearing of this south-west side of the atrium, the total results are 21 statues and remains of statues, and 13 pedestals, 12 with inscriptions and one with the inscription entirely erased. But, alas! there have also been found within and among the remains of the house and its atrium no fewer than four limekilns. They tell a fearful tale of art massacre, which was probably arrested at the spot where the last of these kilns was cut through, at the height of about three mètres above the level of the atrium, close

to where the statues of Vestals were lying huddled together, and they add further to the abundant proof already possessed that thousands of priceless works of sculpture which adorned the ancient city perished in this way to provide lime for the builders of Mediæval Rome. They fully account also for the complete nudity of the north-east side of the atrium. Of the marble slabs which formed its pavement and panelled its walls, of the many columns that extended along it, or of the statues and their pedestals that stood within it, nothing was found remaining but two or three small fragments of columns of breccia corallina, the cushions, or foundation-stones, flush with the ground, on which the columns of the portico stood, and the three pedestals first discovered at "A" on the plan, which had been used in the building of some later edifice at the north extremity of the atrium, close under the Church of Santa Maria Liberatrice. It must have been in the spoliation of this side of the atrium that the fourteen pedestals of statues, of which the inscriptions were preserved and are registered, together with those of three others found elsewhere, in the "Corpus Inscriptionum Latinarum," were dug out in the fifteenth and sixteenth centuries. Adding to them the thirteen disinterred since these excavations were begun makes thirty, independent of the many more which, like the statues on that side of the atrium and in other parts of the house, have been utilised for lime, or, like the stones of the Colosseum, for building purposes.

The fourth of these pedestals was discovered at the extreme southern end of the south-east side of the atrium, standing against the front of the house, at the point marked "D" on the plan, and the fifth at "W" after the works had been carried a short distance



along the south-west side. These, and some fragments of sculpture in the general mass of accumulation, were all that was found until comparatively virgin ground was reached a little further on, and from the statues and pedestals discovered there one can well judge what a wealth of art the atrium must have contained, and what a veritable sculpture gallery it must have been.

The first of the thirteen pedestals found was in honour of a Grand Vestal, named Flavia Publicia, and was placed on the 5th of the Ides of July, when an Augustus and a Cæsar, whose names had been erased, were Consuls together; the second was dedicated in the year A.D. 364 to a Grand Vestal, whose name had been erased; the third was in honour of another Grand Vestal named Coelia Claudiana, but bearing no date. The "Corpus Inscriptionum Latinarum" contains, however, the inscriptions of six other pedestals dedicated to this Vestal, and one of them shows that the twenty years and more during which she filled the office of Vestalis Maxima included that of A.D. 286. The names of the Consuls erased from the pedestal of Flavia Publicia's statue were undoubtedly those of Philip Augustus and his son Philip Cæsar, who were Consuls together in the year A.D. 247. They could not have been those of Valerianus and Gallienus, for the reason that they



were both Augusti, and this inscription treats of a Consulship held by an Augustus and a Cæsar. Moreover, the spaces occupied by the names erased are equal, and are too small for those of Valerianus and Gallienus. The "Corpus Inscriptionum Latinarum" contains the inscriptions of two other pedestals dedicated to Flavia Publicia, one of which bore the names of Valerianus and Gallienus, and the other of an Augustus and a Cæsar erased exactly as they are in this one in question of the first three of the pedestals found. But among the ten which have been discovered since are five others dedicated to the same Flavia Publicia, and one of these bears the date corresponding with the year A.D. 257. Now these eight pedestals were all standing in the atrium at the same time, and it is impossible to suppose that, if there had been any reason for carrying into effect the *memoria damnatio* against Valerianus and Gallienus, their names would have been carefully erased from two of the pedestals, and left plainly legible on two others. The only other instance applicable of an Augustus and a Cæsar being Consuls together was when that office was held by Carinus and his son Carus, A.D. 283, but theirs could not have been the names erased from the pedestal of Flavia Publicia, for the reason that the office of Grand Vestal was then held by Coelia Claudiana.

### MARBLES FROM THE TEMPLE OF DIANA.

ON Thursday afternoon last week Mr. J. T. Wood lectured in what is now styled the Ephesian Gallery of the British Museum, leading into the Elgin Gallery, on "The Marbles from the Great Temple of Diana." The lecturer said that the finding of the Temple of Ephesus had been a difficult thing to accomplish, and that it was six years before he succeeded in hitting upon the site. It was found one mile from the city, among corn fields, on level ground where there was not the slightest sign of any ruins, and that accounted for the difficulty in finding the remains, and for the time occupied in doing so. Having found the site he discovered sufficient of the remains to enable him to make a true elevation of the temple, but there were some details still missing which, he hoped, would be obtained by further excavations. They had a rough diagram before them from which they would see that it had one hundred columns externally, each quite 6 feet in diameter, and very nearly 60 feet in height. Only a portion of the superstructure had been found, which was the lower part underneath the capitals, some of the lions' heads, and some of the enrichment of the cornice. The diagrams which they saw coloured were meant to show that the whole of the temple was coloured. The remains which they saw before them had lost their colour since they were placed in the museum, with but few exceptions, but there was one specimen before them in which the colour was clearly demonstrated. Several of the coloured diagrams would, however, show the state in which he found the fragments. He should tell them that these remains were found between 20 feet and 24 feet underground, and their being at so great a depth beneath the surface accounted for the great expense of these excavations, the Government having spent 12,000*l.* upon them during the five years which it took him to clear out the temple. Now, to begin with the base of a column before them, it was the base of an ordinary column, thirty-six of which were sculptured. The fragments were placed in that room pretty nearly as they were found in the temple, and this would give them some idea of the arrangement. The base before them was found 13 feet underground to the top of the base, and was the only specimen of a base found so far underneath. Fortunately there was enough left of it to enable them to make a drawing. It was between the Greek and the Roman style. The Greeks used the more refined cornice section, but the Romans were content to use the segment of a circle, and he thought there was not a right angle in all Greek architecture. To come to the sculpture of drums, the one before them he need scarcely point out was the finest specimen of sculptured columns, of which Pliny said the temple had thirty-six in all. This specimen was found at a great depth, but when they turned it up it was found to have very beautiful figures upon it. It was evidently an assemblage of the gods, the figure of Mercury being very prominent. It was a question whether this drum was at some former time mounted on a base, because, as they found in the temple of Apollo at Branchidæ, the few specimens remaining differed in outline and in ornamentation. He need scarcely tell them that the remains they now saw were from the last of the three successive temples. He found evidence that all the bases were of about the same size, and that the same marble was used. There were two stones at the end of the temple which, he believed, belonged to the frieze of the temple, and which were got out from the drums of the last temple. One which was marked H4 he believed would be proved to be, what he had always thought it was, a portion of the frieze. Upon it was a representation of Hercules struggling with a female figure, and he believed it was Hercules taking the girdle of the Queen of the Amazons. The stone was very much hacked and disfigured. Mr. Fergusson thought that a column had been placed upon this, but there were reasons to the architectural mind which precluded the idea that this stone could have been part of the pedestal of a column.

There was a second stone, which he believed was a portion of the frieze of the temple. Upon one side of it was a representation of either Hercules lifting Antæus, or Hercules struggling with Cacus, probably the latter. On the other side they had the figure of a stag. These were the only stones which he claimed to be portions of the frieze. There was a third stone which was found in the aqueduct, and another which might or might not have been a fragment of the frieze, but it was at all events a corner-stone. All these blocks were supposed to have come from the same building, but whether they were portions of pedestals, on which columns had been placed, as contended by Mr. Fergusson, was a question which would probably be decided by further excavations. Alluding to a fragment of a sculptured column marked H3, Mr. Wood said the question was whether Pliny would have called it a sculptured column if it had been of the height of this drum. Some people thought the columns in the diagram could not have been sculptured columns above the height of one drum, but he begged to differ from them. Passing on to another fragment of a sculptured column, the lecturer said he looked upon it as the most beautiful of all, and it was a pity it had been so much hacked about. This temple was built in the time of Alexander the Great, and when he visited Ephesus he wished to have his name inscribed upon it. These sculptured columns were very likely knocked off very quickly, and, if he were right in placing them, were sculptured to the height of three drums. The lecturer here pointed out other specimens, one being a beautiful stone which had formed part of the base of a column, and another in which the delicate proportions of the fillet between the flutings were very noteworthy. He further remarked upon fragments of roof tiles, lions' heads, and various fragmentary specimens of Ionic columns. There were also some splendid specimens of profiles of base mouldings, a representation of a medal of Gordianus found on the site, &c.

### ARCHDEACON THICKNESSE ON RESTORATION.

ON occasion of the annual visitation, Dr. Thicknesse, of Northampton, in his address alluded to the subjects of the maintenance of the fabric of ecclesiastical buildings and the custody of local registers and other documents. He said:—

It is a main part of my duty, in conjunction with the rural deans of the several deaneries in the archdeaconry, to stir you up to a full discharge of the duty of maintaining the churches in really good and substantial repair. I think it a good plan for churchwardens to take a particular survey before they answer the articles of inquiry, or immediately upon their appointment. You have now the whole summer before you for putting all good intentions into execution before autumn winds and winter rains set in. "It is the stitch in time that saves nine," and I venture to say that a watchful care and observation are as necessary in respect of a so-called restored as of an unrestored church. Because a church has been recently restored, churchwardens are sometimes too apt, I think, to feel it does not now need vigilance. Indeed, I have heard the expression, "It will do now for a hundred years to come." But how often a defective bit of work or incipient dry rot may be set to rights this year at scarcely any cost, which, if left to next, will have become very serious, or even beyond repair. I rejoice to say I have a list before me to-day of works begun, continued, or ended, of which any archdeaconry might be proud, and especially in the depressed condition through which all agricultural counties are passing. In the first place, there are three new churches in course of erection. The nearest to completion is the church of Silverstone—the second church for which we have to thank the generous proprietor of Whittlebury, Mr. Loder, M.P. I have visited it in company with Mr. Loder and the architect, Mr. St. Aubyn, and I was truly rejoiced to see so fair and goodly a structure standing on the site, and partly formed out of the materials of one of the most deformed specimens of the worst period of English architecture. The other two new churches are those of St. Crispin and of St. Mary, Far Cotton, for the foundation stone-laying of which we have recently had such happy and successful gatherings in Northampton. Then, to Lord Spencer's unvarying goodness and consideration, Dallington parish is indebted for a beautiful new chancel, which was consecrated and opened in November last; while Mrs. Whitworth, of Dallington Hall, has presented a new organ. To the Marquis of Northampton we owe a substantial and well-built aisle, with oak roof, to the still much dilapidated church of Yardley Hastings. A very important restoration, at a large cost, has been carried out at Towcester parish church, under the care of Mr. Pearson, R.A., a work which reflects the greatest credit both upon Mr. Pearson, and upon the vicar and the churchwardens, who were zealous beyond all praise, in obtaining so considerable a subscription at such a time. The further restoration of Long Buckby has been completed since we met in that church at a visitation last year. Very spirited efforts are being made by their incumbents for the restoration of Staverton and Clipstone churches; while at Moulton, Mr. Nethercote and Lady Loyd Lindsay have headed a subscription for the same object with 500*l.* each, and it is almost certain that the much needed reinstatement of that handsome but half-ruined fabric will, at no distant day, be successfully



accomplished. Paulerspury Church has been improved by His Grace the Duke of Grafton, in causing the clerestory windows to be filled with stained glass. Repairs, ornamentations, and improvements have been going on at Northampton All Saints', Northampton St. Edmund's, Watford, Earl's Barton, Adstone, Abthorpe, Thenford, Brackley, Cold Ashby, Daventry, Eydon, Duston, Mear's Ashby, and other places. A munificent gift of a peal of bells, at a cost of 1,000*l.*, has been offered and executed by Mr. Churchwarden Tomes, for the tower of St. Edmund's, Northampton; while at Moulton the bells have been thoroughly repaired; and at Wellingborough parish church the whole peal has been set in order, and a new bell given by a parishioner, and also a new organ erected in the church at a considerable cost. At Newnham a restored chancel is in contemplation by Mrs. Thornton, of Kingsthorpe Hall, while that honoured name deserves further record to-day, through the noble addition of a newly-built and carefully-planned vicarage house to the parish of Earl's Barton, raised at his own cost by Mr. Edward Thornton, the patron; and by him conveyed to the Ecclesiastical Commissioners, who, in return, have permanently given 50*l.* a year to that ill-endowed benefice.

There is a very important matter which recent discussion suggests connected with the responsibilities of both clergy and churchwardens, which I desire to bring forward to-day. I mean the custody of the registers. Although the rector, or vicar, or officiating minister is the custodian of these, as well as of all parish maps, terriers, and other documents, yet the churchwardens are bound to find the means of their protection and safety. It is enacted by the 52nd George III., c. 146, cap. 5, "That the several books wherein entries are to be made, and all register books heretofore in use, shall be deemed to belong to every such parish, or chapelry respectively, and shall be kept by, and remain in, the power and custody of the rector, vicar, curate, or other officiating minister, and shall be by him safely and securely kept in a dry, well-painted iron chest, to be provided and repaired, as occasion may require, at the expense of the parish, and which said books shall be constantly kept locked in some dry, safe, and secure place within the usual place of residence of such rector or vicar, if resident within the parish; and the said books shall not, nor shall any of them be taken or removed out of the said chest at any time, or for any cause whatever, except for the purpose of making entries, or for the inspection of persons desirous to make search for them, and immediately after be forthwith and safely and securely deposited in the said chest." It cannot be too forcibly impressed upon the minds of all parish officers that our old registers and maps are the history of families and parishes, and that most important matters of property depend upon their being preserved from fire and accident, and kept absolutely secure from the possibility of being tampered with. Anything like the request of an antiquarian or topographer, whether in the parish or out of it, to have the loan of a register book to take away with him for a day, or even for an hour, should be peremptorily refused by the incumbent. Nor should any applicant, searching the registers (whoever he may be) be allowed to search them alone; and if any person not authorised to possess them has, through inadvertence or neglect, obtained possession of these parochial heirlooms, an injustice is being perpetrated against the whole community, and application should be urged in the name of all for their restoration to the parish chest. I need hardly say an attempt is now being made to take the custody of the old registers away from the clergy, and to remove them from the parishes and carry them up to the metropolis, so that any one wishing to search them would have to go to London to search them there. I will not enter now upon all the arguments that might be advanced against the growing principle of centralisation in everything. But if our parishes wish to retain their own registers and parish history, it is obvious that the very first thing to be done is to cut off any shadow of complaint that may be urged against lax, and careless, and insufficient custody. The three archdeacons have agreed upon a form for certifying the security of the registers in every parish of the diocese, and these forms the clergy will receive through the rural deans.

#### UFFINGTON CHURCH.

THE members of the Oxford Architectural Society, in company with some members of the Newbury District Field Club, paid a visit to this church on the occasion of their recent excursion.

The vicar, the Rev. H. Gurney, addressed the visitors when assembled in the chancel, and said that the fact of their being two piscinas in this church had puzzled most archaeologists who had been there. The church told its own tale, being Early English throughout. The original Uffington church was founded by Fari-tius, nineteenth abbot of Abingdon, in the year 1105, and it was recorded that the abbot came there and urged the men to a more speedy completion of the work. There were no remains on this spot of the Norman church.

Mr. James Parker observed that the church stood almost unique in this particular—that it was a church absolutely of the same date

throughout, and they saw it as it came from the hands and mind, so to speak, of the one architect and builder. They seldom saw that in these days, as the great majority of old churches presented styles of architecture of later periods than that prevailing at the date of their erection. They had now the privilege of seeing everything complete of a church of the early part of the thirteenth century, probably dating from the year 1240 or thereabouts. The church was entirely characteristic throughout, in every detail, of the architecture of Henry the Third's reign. There were difficulties with regard to the historical evidence in this particular case. This church stood between two of the greatest monasteries of Berkshire—the abbey of Reading and the abbey of Abingdon—and if a Norman church had ever existed on that spot all traces of it had been entirely obliterated. His own view was that the Norman church at Woolstone had not been removed from Uffington. If such a church had been built at Uffington it would have been but a small one, and it might have been put, roof and all, inside the present structure. Most likely it was erected on an entirely different site to that on which the present church stood. Mr. Parker then pointed out the ingenious method by which the architect had been able to meet the difficulties of combining the erection of a central tower with the provision of a wide and roomy nave, without producing an unsightly effect; while in one or two modern attempts of the kind, which Mr. Parker instanced, the result had not been at all satisfactory. The straight-sided arches in the church were unique, and the mouldings throughout of a very beautiful description; indeed the church represented in a marked way the principal features of the mouldings that were met with about the middle of the thirteenth century. The ironwork on the church doors was interesting, and probably of the same date as the building. Some of the woodwork of the doors also appeared to be of the same date as the church itself, which was a rare circumstance. On leaving the sacred edifice, Mr. Parker drew attention to the fourteenth-century windows in the chancel, one large window indicating the position of the priest while saying the office, the extra amount of light being introduced for his convenience.

#### BUILDING IN NEW YORK.

A CORRESPONDENT writing from New York says that old buildings are being torn down by the hundred to make way for new, larger, and better ones. A great many blocks of new houses are being built, and vacant lots are being covered with edifices of a size and splendour never before seen anywhere in America. Street railways, parks, and aqueducts are projected, which will lead to the expenditure of at least 50,000,000 *dols.* if a majority of the schemes are carried out; one main cause of this activity being the long-continued decline of prices on Wall Street, and the anxiety of large numbers of small investors to find solid investments for their money. New York seems destined to be a city of large buildings. The community can grow only in two directions. One is longitudinally along the narrow island on which the city is planted; the other is perpendicularly. A strong effort is being made to keep the wealthier part of the population below the Park. The only way to do it is to construct dwellings of great height; and French flats and apartment houses are going up now in great numbers with this idea in view. The era of tall residences began about ten years ago. A few small "flats" were built, and proved quite successful. In 1875 a large number were projected, and since the past two years flats and large apartment houses have become the favourite investments of large operators, and they are now being constructed at the rate of 500 and 600 a year. Nearly 3,000 in all, of both classes, have been built so far. The apartment houses have been introduced from London. They are all six, eight, and even thirteen and fourteen storeys high. A great cluster of them stands near the lower end of Central Park on Sixth, Seventh, and Eighth Avenues, and others are scattered all over the Murray Hill region from Fourteenth Street to Fifty-ninth Street, which bounds the lower end of the Park. The tendency now is toward the building of apartment houses that are absolutely fireproof. Too few of the existing ones are of this description. Out of the 107,300 buildings in New York on January 1 last only 65 dwellings were reported as absolutely fireproof. The City Government will not now sanction the erection of apartment houses unless the plans which are submitted indicate an intention to use iron beams in the floors and cement partitions between the rooms. The finest apartment house in New York is now nearly completed. It stands in the region just below the Park already mentioned. The ground in this region is high, the air is good; the view from the upper windows is attractive, the Hudson river, with its panorama of active traffic, and Central Park with its diversified scenery are both visible; the finest private residences of the city are near by, and an elevated railway is close at hand to carry the inhabitants to the business centre of the city in twenty minutes' time. The apartment houses in this region range from 300,000 *dols.* to 1,000,000 *dols.* in cost, exclusive of the land; but the large one now building on Fifty-ninth Street, at the corner of Seventh Avenue, will, when completed, cost nearly 5,000,000 *dols.* (although this includes the land). A plot of ground 400 feet long and 200



feet wide is divided into eight squares, on each of which a house has been built eight storeys high on the street and fourteen storeys high in the rear. Arches and galleries connect the several buildings. The first storey or two is of stone, the rest of red brick, after the fashion current in the apartment houses of the city. Brick, cement, stone, and iron constitute the whole structure. The large suites of rooms cover one whole floor, and are arranged as follows:—Reception room, 14 feet by 28 feet; drawing room, 23 feet by 39 feet; library, 14 feet by 29 feet; dining-room, 20 feet by 23 feet; six bedrooms, ranging from 14 feet by 18 feet in size to 22 feet by 24 feet; three bedrooms for servants; kitchen, 18 feet by 20 feet; three dressing-rooms, with bath tubs; and a number of large closets and pantries. The smaller suites contain eleven rooms each, exclusive of closets. There are twelve suites in each of the eight sections of the structure. The suites of rooms are all to be sold outright to private owners. A courtyard 300 feet long by 40 feet wide remains open to the sky in the interior of the house. The apartment houses are growing in popularity yearly. The crowded condition of the business part of New York, on the lower end of the island, is leading to the construction of high buildings there also. Owners are compelled to economise in land, and gain capacity by going up into the air eight, ten, and occasionally twelve stories high. There are now about twenty tall buildings in the lower part of the city.

### NOTES ON HERALDRY.\*

TO the general public, and even to artists, the study of the ancient art and science of heraldry, or, more properly speaking, that branch of it known as armoury, is an anachronism, if not an absurdity. A learned judge (I rather think it was Lord Westbury) once heard a case in which the services of an heraldic expert were considered necessary and had been secured. In summing up, the judge referred to the herald as "that silly old man who did not even understand his silly old trade." Some other wise man has defined heraldry as the "science of fools with long memories." These dicta will suffice to show that heraldry, once a necessary part of every gentleman's education, has fallen into a low estate in these latter days. Without wasting time, however, in deploring "bad times," I will endeavour to briefly show that a knowledge of heraldry is still a worthy and valuable acquirement, especially for the architect. The study has not been altogether neglected in this room, for I recall with great pleasure a most excellent paper read here some years ago by Mr. Hummel. On many points I shall be contented to allow my remarks this evening to echo his.

In the first place, a knowledge of heraldry is a great, I may almost say an indispensable, aid to antiquarian study and research. Planché called it the "shorthand of history." Especially is it useful in deciding the dates and history of buildings. Our forefathers preferred commemorating themselves and their time upon the structures they raised by the pictorial language furnished by armorial details rather than by the simple use of numerals and lengthy inscriptions. I think, at any rate from a decorative point of view, they adopted the more excellent way. There is a drawing on the walls taken from Mr. Gotch's excellent book on Sir Thomas Tresham's buildings which shows the frieze of Rothwell Market House. This is a valuable example of the architectural use of coats of arms, and the interest of the building is greatly enhanced by such a graphic catalogue of the Northamptonshire gentry, contemporaries of Tresham. This is to name but one instance. In Mediæval and Early Renaissance times, however, the employment of armorial decoration was universal on walls, vaults, tiles, stained glass, &c., and every shield or badge told, and still tells to those who care to read, its own story.

I remember having to decide the date of a church tower on one occasion. Upon the cornice I noticed some carved badges, and at once the problem was solved. There were the badges of the sovereign, his queen, and the bishop of the diocese, and their concurrence enabled me to fix the date within a very close limit of years. The importance of a knowledge of heraldry to the student of literature I pass by, as being beyond the scope of my remarks this evening. But I cannot refrain quoting the reference to the Yorkist badge in the grand opening of "Richard III." "Now is the winter of our discontent made glorious summer by this sun of York." Heraldry has, too, its modern decorative use; indeed, if it had not, perhaps I should scarcely be justified in taking up your time this evening. If employed with knowledge and due purpose, the results to-day are as delightful and interesting as of old. In one point armorial detail always possesses an advantage over ordinary architectural ornament. It gives a "human touch" to the building on which it appears. The arms of the ill-fated Horsey family still remaining carved on a doorway at Clifton Maybank seemed to give, on our visit during last year's excursion, a sad, almost pathetic, interest to that lovely fragment of a once noble mansion-house. Touching this an old writer has said:—

"How great the dignity and estimation of arms ever hath been

and yet is we may easily conceive by this—that they do delight the beholders, and greatly grace and beautify the places wherein they are erected; so also they occasion their spectators to make serious inquisition whose they are, which is the owner of the house wherein they are set up, of what family their bearer is descended, and who were his next and who his remote parents or ancestors." Apart from this, heraldic ornament possesses an intrinsic charm in the almost infinite variety of its figures and the brilliant and charming contrast of its tinctures. With regard to the speculative question of the origin of heraldry the architectural student need not disquiet himself. The art, as far as we are concerned, may be considered as having been developed synchronously with Mediæval architecture. We may therefore dismiss from our minds that earlier heraldry which the old writers loved to fondly imagine, and with it all right to bear as descendants the arms gravely attributed to the "grand old gardener and his wife," with those interesting augmentations of fig-leaves and an apple. The old heralds "found" arms also for the twelve tribes of Israel (I possess a book with engravings of these), Noah, Japheth, "the nine worthies," &c., and even for Our Lord Himself. But enough of such folly, which has no more to do with true heraldry than alchemy has with science.

For the purpose of study I would recommend recourse as much as possible to actual examples of old armorial decoration. Grammars such as those of Planché and Boutell are most excellent and very useful to the beginner, but so much have the fantasies and absurdities of the sixteenth and seventeenth-century heralds affected all our literature on this subject that it is of very great importance to test all statements by independent study. The student in London has a mine of wealth in Westminster Abbey with its tombs of all dates, and St. Albans, with its (to my mind) almost unequalled examples of Mediæval heraldic carving, is not far away. Very good suggestions also may be obtained from the late tombs at Chelsea Old Church, St. Helen, Bishopsgate, and other churches of the metropolis. For the purpose of discovering the names of families who bore the arms you may find upon old tombs and buildings, where intrinsic evidence is lacking, the "Ordinary" compiled upon a unique plan by two architects, the late J. B. Papworth and A. W. Morant, will prove most useful. I have no intention this evening of treating you to a grammar of heraldry. I will, using as few technical terms as possible (although I must presume some slight knowledge of the subject on the part of my hearers), endeavour to touch upon some of the main divisions of the art, and draw attention to the points which appear most important to the architect. We will consider the heads of the subject in the following order:—The shield or escutcheon; the colours used to tincture the same, and its charges; the helmet and its crest; the minor accessories in an "achievement" of arms, such as mantling, motto-ribands, and supporters; and, finally, badges and rebuses. The shield is the most important figure in heraldic decoration. In Mediæval times it was first long and narrow, and its subsequent developments of form corresponded in some degree with the progressive changes of arch form in the architecture of that age. Unless the charges are simple the early form does not lend itself satisfactorily to their display. Mr. Hummel gave a good rule for drawing a "middle-pointed" or "beater" shaped shield, which is certainly a very excellent and beautiful type. I would, however, plead for freedom in shield form, especially in these days, when the military or chivalric character of heraldry has vanished. The later squarer and more obtusely-pointed escutcheons are much better adapted to receive numerous changes, especially when the coat is "quartered." With the growth of the Renaissance the forms of shield became more varied and the outlines more flowing. Eschewing such examples as are simply fantastic and "rococo" in character, in my opinion you will be able to select a greater variety of shields from buildings of this period thoroughly artistic, and yet suitable in form. Especially I would advise the study of Italian heraldic representation, as it possesses a greater freedom and beauty of line than we usually find in English work. Although wanting, perhaps, in pronounced heraldic feeling, I have seen simple oval or "cartouche" shields framed with vigorous scroll work, quite admirable in design so far as decorative effect was concerned. The arms of spinsters and widows are now invariably placed upon a lozenge-shaped figure, which does not lend itself, in my opinion, to very satisfactory treatment. The ladies are also denied the use of a crest. Perhaps in these days of reform they may be able to effect an improvement in these respects. The occurrence of the notch or mouth for the lance at the dexter or right-hand top corner of a shield often assists in giving improved character to its outline. A very beautiful escutcheon possessing this peculiarity is often found in Late Perpendicular buildings, especially, I think, in Somerset (*vide* "The George," Glastonbury; the Vicars' Close, Wells, &c.). There is an escalloped outline to the top and the base, and the surface of the field itself is delicately fluted. In Mediæval sculpture you will find other examples of varying the surface of the shield. There are early examples which are strongly convex, and in later times some may be noticed with a central ridge and "bracket" section, whilst others are concave. There are two or three forms of shield employed in Georgian times, which, on the score of ugliness, may well be avoided. Always endeavour to

\* A paper by Mr. Charles Richard Pink, read before the Architectural Association, May 30, 1883.



adopt an escutcheon with such an outline as will admit of receiving the charges of the coat you wish to represent with ease and good effect. The usual position of the shield is upright. It is sometimes, however, represented "*couchée*"—that is, placed diagonally. This variation often has a good effect; but when too frequently indulged seems to savour somewhat of affectation.

The tinctures (including metals) used in armoury are gold (or yellow), silver (or white), gules (red), azure (blue), sable (black), vert (green), and purpure (purple). The last is but rarely employed. Besides the foregoing, certain conventional furs are used for fields—viz., ermine and vair, with their respective varieties. Sometimes charges are blazoned as "*proper*"—that is, of their natural colours; but I may mention here, what I shall again have to refer to—viz., that heraldic representations must be conventional, and that the "*proper*" colour may generally be taken as meaning the one of the above tinctures which approximates most nearly to the natural colour of the object to be depicted. I need say but little respecting the tinctures themselves, except that there is no hard and fast rule of exact tint or tone for them, and the artist is not necessarily obliged to use the crudest colours on his palette. As to the furs, the designer should certainly have recourse to Mediaeval sources for inspiration. Ermine spots are especially most poorly drawn in these days. The three hairs, surmounted by three dots, is not an admirable arrangement. The old forms, either the wide-spreading brush surmounted by a *fleur-de-lis* form, or the simple patch of conventionalised fur, are every way more artistic. With regard to vair, which consists of small blue and white shield-forms placed alternately in juxtaposition, I would only mention that there is an ancient way of depicting it with wavy lines, which appears to me more graceful. The fact that the contrast of tinctures in heraldic decoration is always satisfactory is no doubt largely due to the general rule which forbids colour to be charged upon colour or metal upon metal. Whenever the situation admits of it, let your armorial details be painted. For the tincture is, of course, a distinctive and essential part of every field and charge.

I remember seeing once in some work by Mr. William White a shield introduced, the heraldic colours being obtained by inlaying various coloured marbles. Pray do not follow the common rule of indicating tinctures on stonework by tooling lines in different directions. Before the days of colour-printing this plan was adopted by heraldic engravers, and it proved an admirable one for their purpose. We, however, need not treat our buildings as if they were mere dictionaries of arms. The custom is destructive to the proper artistic treatment of charges upon shields, and it would be less obtrusive, and not one whit more absurd, if in lieu of scratchings and dottings we cut initial letters to indicate the tinctures, after the manner of the old heralds in "*tricking*" arms. Irrespective of any charges, the plain fields of arms may, in coloured decoration, be "*broken*" and varied by what is known as "*diapering*"—that is, covering them with fanciful diaper scroll-work, &c. Diapering may be most varied in designs, but its forms must be such that they cannot be for a moment mistaken for true heraldic charges. In carved work the diaper must be in the lowest relief to make it quite subordinate to the charges, and in coloured decoration it is perhaps best to let the patterns be put in with a darker shade of the tincture upon which they are placed. The simplest heraldic distinction in a coat of arms is a field of varied colour. This is formed by parting the shield with lines in various directions, such as vertically in the centre (*per pale*), quarterly, and so on, the different sections being of opposing tinctures. The dividing lines are sometimes themselves varied from the straight, and are wavy, dovetailed, embattled, &c. Where a shield is thus "*party*" of certain colours, do not attempt to enhance the effect of the divisions by any indications of shadow.

Now as to figures or charges, as they are called, placed upon the field. Foremost come those simple bands and other forms known in the grammars as ordinaries and sub-ordinaries. Such are the chief, the bend, the pale, the fess, the chevron, the cross, the bordure, &c. I need not give you a catalogue of them, as you will find them fully described in books on the subject. These simple charges may, in some cases, have been derived from constructional details of the shield, but they are just such simple forms as must almost have been perforce adopted by the heraldic painter wishing to differentiate shields in a clear and easy manner. Heraldic authors give exact rules with regard to the proportion of ordinaries, &c., to the field, and these are, no doubt, some guide to the designer. The study of ancient examples will, however, show that the old heralds did not allow themselves to be bound by rigid regulations in this respect, nor do I think they recognised as distinct charges the numerous diminutives of the ordinaries which are given by modern authorities. Working with thorough knowledge and true heraldic instinct and spirit, the old carvers and painters, while never permitting a coat to lose its identity, modified the size of the so-called ordinaries and other charges in order to produce a shield filled with a well-arranged and well-balanced heraldic composition. They never lost sight of this. One consideration which principally influenced them in deciding upon the width for any particular ordinary was whether it was itself to be charged with other figures, animals, or what not. Take the arms of Cardinal Beaufort, for instance: he bore "France and England

quarterly within a bordure gobony argent and azure." We find this shield constantly carved upon the buildings founded by him, and I have noticed that the bordure having no charges is always much reduced in width, in order to give ample display for the more important bearings on the field. The arms of Prince John of Eltham, which may be seen on his tomb in Westminster Abbey, are also "*within a bordure*." The bordure being charged, however, with numerous *fleurs-de-lis*, is much wider and more important than that depicted in the arms of Beaufort.

Another good example of variations in the proportion of ordinaries may be noticed in the two shields engraved in "*Boutell*," which belonged to different branches of the De Bohun family. One shows "*a bend cotised between six lions*"; the bend being uncharged is drawn very narrow, in order to give space for the display of the lions. The other coat is similar, but shows three escallops borne upon the bend as a difference. In this case the bend is widened so that the escallops upon it may be properly shown. To take one more instance of this desire on the part of the old heraldic artist to properly "*fill*" the shield; I know a coat which bears a pale of lozenges. Now these lozenges in modern representations (following the books) are shown with their longer diagonals placed vertically; but upon old tombs I have noticed that they are placed in the reverse position, no doubt the better to occupy the field, which is uncharged.

Now, as to general charges. In the early days of heraldry their variety was but small; but as time went on and coats multiplied, the necessity of making numerous distinctions forced the heralds to adopt images of all things in the heaven and earth, and in the waters under the earth. Old Guillim says:—"These arms are composed of natural things, as of some kinds of celestial bodies—viz., of the sun, moon, stars, &c.; sometimes of four-footed beasts or of birds, or of serpents, or of fishes or some other reptiles, or else of some kind of vegetables, as trees, shrubs, flowers, fruits, leaves, &c.; or else of some solid things, as castles, towers, mountains, &c.; or of things pertaining to arts liberal or trades mechanical, &c. Sometimes, again, they are compact of none of these, but do consist only of the variations of simple colours, &c." And, again, in another passage, he quaintly contrasts the items in this long catalogue of charges thus:—"The forms of the pure celestial bodies mixed with gross terrestrial, earthly animals with watery, savage beasts with tame, whole footed beasts with divided, reptiles with things gressible, fowls of prey with home bred, these again with river fowls, airy insecta with earthly; also things natural with artificial, arts liberal with mechanical, military with rustical, and rustic with civil." In representing any of the numerous figures used as charges, the most important thing to aim at is a due conventionalism of treatment. Heraldry as an art is decorative, but not pictorial. Take the lion, for instance, which, in different positions, is used more frequently than any other animate creature as an heraldic charge. Pray do not adopt the modern plan of giving a portrait (or caricature) of "*felis leo*." The heraldic lion should exhibit as "*unnatural*" and distinctive a type as does the heraldic "*tyger*," which is admittedly no near relative of the Bengal man-eater. The fact that a lion may have to be blazoned blue, red, green, black, &c., is sufficient to show that his heraldic representation must be quite conventional. The lion is such an important charge in heraldry that I would recommend the student to very especially study its treatment in old English and Italian examples. Endeavour to enter into the spirit and feeling of the old designers. Always infuse lions and other animal charges with "*go*" and freedom of movement and action. However extravagant and quaint the ancient figures may be, a lion's strength, fierceness, and activity are almost always expressed. Also especially note how lions (and other animals) were made to fill the shield. Old representations of the arms of England abound, and in them you will not find three lions depicted each being an exact copy of the other. On the contrary, you will notice that there is variety in the drawing of each lion, and that in order to properly cover the field the beasts vary in size, and their limbs are enlarged or reduced as may be required by the exigencies of the outline of the shield. Mr. Hummel, I remember, called attention to the fact that, in drawing lions rampant, modern designers always show the tail falling over from the back. In Mediaeval examples it turned over towards the back. Lions "*passant*" (or walking) are, however, properly drawn with the tail turned back, and not under next the body. The eagle is another common charge which should be carefully studied in the light of old examples, and the principles of its proper representation obtained. It will be found that the heraldic differs very widely from the natural type. German drawing of eagles (as also of other charges) is often very suggestive, though sometimes extravagant. If I remember rightly, there is some fine old German glass at the South Kensington Museum having some excellent heraldic figures of eagles.

It would be impossible this evening to go through even the commoner charges in order to point out how they should, or how they should not be represented. I would, however, particularly caution you against adopting the ordinary modern forms of the following—viz., trees, martlets, manches, hawks'-lines, water-bougets, mill rinds, crosses, labels, &c. I have some sketches here showing the proper representation of the label and the manche.



The examples shown of the latter charge will furnish another good instance of the modification in form and size of the principal bearing to suit the better representation of the other charges on the shield. When similar examples are met with, be sure to sketch and study them. Artistically speaking, it is of the first importance, as I have suggested before, to consider the general composition of a coat of arms, with a view to representing the same with an agreeable balance of parts and a well-covered field. Having obtained a proper knowledge and acquaintance with the science of heraldry, you will find that, within limits, the success of armorial design depends greatly upon the artistic feeling and skill of the designer. The disposition and size of charges may be treated with some freedom, as I have already pointed out, and merely mechanical arrangements and repetitions may be often avoided. Where there is but a single charge, let it fill the shield well; nothing looks poorer, for instance, than to see a shield bearing a lion rampant when the lion is drawn to a small scale in the centre, its limbs approaching nowhere near the confines of the field.

A representation of the Woodroffe arms from an old monument gives us another not unusual mode of adapting the size of the charges to the space to be filled—viz., in cases where there are three similar charges divided, "two and one" by, say, a chevron or fesse, to considerably increase the size of the one placed in base. Although this plan is quite admissible, it is in some cases better (if the form adopted for the shield will admit of it) to endeavour by careful arrangement to obtain similar sized spaces for the three charges, so that they need not be varied greatly or at all in bulk. Old representations of the arms of the great architect, William of Wykeham, are as noteworthy in this respect as modern copies of the same usually are for particularly bad arrangement of charges. In one public building I have even seen the arms of Wykeham painted in wrong tinctures. Sometimes one charge is allowed to entirely "abscond" or obliterate others. During last year's excursion we noted a good example of this in the arms of Young at Trent. These are thus described—"three roses and a canton gules;" but in representing them the canton covers one of the roses, and only two therefore are allowed to actually appear on the face of the shield. I need not proceed further this evening with this branch of our subject.

(To be continued.)

## LEGAL.

### High Court of Justice, Queen's Bench Division.—May 28.

(Before Mr. JUSTICE FIELD, without a Jury.)

#### BARNARD v. CARR.—ANCIENT LIGHTS.

This was an action arising out of an alleged interference with the plaintiff's rights to ancient lights.

Mr. C. Matthews, Q.C., and Mr. Hadley appeared for the plaintiff; and Mr. Swan and Mr. Raven were for the defendant.

The plaintiff is the owner of a house in Prince of Wales's Terrace, South Kensington, and the defendant is Mr. J. T. Carr, who about the year 1880 purchased the well-known property of Baron Grant's, Kensington House, with the object of building thereon. The plaintiff's house was situated about 12 feet to the eastward of the boundary wall of this property. And it was proved that the windows, the obstruction of which he now complained of, had existed for twenty years. It was also proved that from 1875 until 1883 there was a trellis work some 40 feet to 50 feet high erected on Baron Grant's land, running parallel to, and about 20 feet distant from, the plaintiff's house. It also appeared, though the evidence on the point differed somewhat, that this trellis work was partially covered by ivy and Virginia creeper. It was taken as admitted that this trellis had been erected with notice to the plaintiff of the fact, who had not apparently objected to it, having purchased his present house after its erection. This being the state of things, it appeared that about July 1883 the trellis work was removed, and the defendant began building a row of houses parallel to Prince of Wales's Terrace, and some 18 feet distant from it. It did not appear that the plaintiff had taken any steps to stop the building in question until October 1883, and in November he obtained an interim injunction in this action restraining further building operations. By this time, however, it appeared that the back wall had reached a height of 41 feet. The plaintiff's case was that the comfort of his house, as well as its selling and letting value, was materially injured by the buildings in question. The defendant first of all contended that the windows in question had not existed twenty years, but the learned Judge ruled against him on that point, as well as another—viz., that the trellis work, alluded to above, was, in effect, such an interruption of the plaintiff's right to ancient light as to be a bar to the present action, under 3 and 4 William IV., chap 71, secs. 3 and 4. The question, therefore, was ultimately narrowed down to whether or not the defendant's building substantially or materially interfered with the plaintiff's rights of air and light, and so gave him a right of action? If it did, what relief was he entitled to?

Mr. Justice Field having heard the evidence of both sides, carefully reviewed the evidence and all the peculiar circumstances of the case. His Lordship referred to the contention by the defendant that the plaintiff's windows were not entitled to ancient lights, and decided the point against him (the defendant). He did not think it necessary to decide whether or not the trellis work was a sufficient interruption to prevent the plaintiff acquiring the easement which he claimed. It was sufficient for him to decide the case on the ground that there was no evidence to show that the comfortable enjoyment of the plaintiff's house had been materially diminished by the defendant's building operations. There would be, therefore, a verdict and judgment for the defendant.

### Worship Street Police Court.—May 29.

(Before Mr. BIRON.)

#### DISTRICT SURVEYOR FOR EAST HACKNEY (NORTH) v. HAWKINS.

The defendant had erected in the rear of his house, No. 9 Rushmore Road, a shed constructed of woodwork, the wall of the house facing one side of it. The roof was covered with felt. It was 16 feet 6 inches long and 6 feet 6 inches wide, the average height being 5 feet 9 inches. It contained two tricycles. There was no direct communication between the shed and the house. The District Surveyor, following the decision in the case of himself v. Snewin Bros. & Co., considered the shed was an alteration, addition, or other work in, to, or upon the building, No. 9 Rushmore Road, and it was subject to the regulations of the Building Act, which required that the walls and roof should be of incombustible materials. The magistrate considered the shed was not an addition to the house, there being no direct communication between them, and that the rules of the Building Act did not apply to such structures, but he would grant a case.

## WORKS IN PROGRESS.

**The Refreshment Rooms** adjoining the Albert Hall, in connection with the International Health Exhibition, have been decorated with Messrs. Rotmann & Co.'s Japanese leather papers.

**The East Window** of St. Michael's Church, Bournemouth, has lately been filled with Munich stained glass, the gift of Miss Durrant, of Branstead Hall, Norfolk, in memory of her uncle, the late George Durrant, Esq., of Norwich, through whose beneficent acts the church was mainly erected. The text illustrated is Matt. xi. 28, "Come unto Me all ye that labour." The artists are Messrs. Mayer & Co., of Munich and London.

**Chester Cathedral.**—A new east window has been erected in the above cathedral—subject, The Presentation—filling the five lights thus:—Centre light, the priest holding the infant Saviour, on either side the Blessed Virgin Mary and St. Anna, and, in the outside lights, St. Joseph and Simeon. In the tracery is represented the Annunciation and emblems of the Holy Trinity, with angels below holding scrolls, bearing inscriptions of praise taken from 1 Chron. ii. Thus the window is full of theological import. The style is Perpendicular, and the general effect very light and lace-like. The quiet, though rich tone of colouring harmonises well with the warm colour of the walls. The window was designed and executed by Messrs. Heaton, Butler & Bayne, of London.

**The Durham Colliery Owners' and Coal Consumers' Association, Limited**, 16A Baker Street, London, W., have introduced a patent smoke-preventor and coal economiser, which insures perfect combustion, cures smoky chimneys, and burns coke, anthracite, and bituminous coal with equal facility, and is applicable to any existing grate or open fire range. We understand its effectiveness has been proved, and it is a very inexpensive appliance. The necessity for disestablishing existing fire-grates or adopting unsightly objects seems to be entirely avoided by this arrangement, which can be made in any ornamental style.

## CHURCH BUILDING AND RESTORATION.

**Idle.**—The Old Chapel at Idle has been undergoing renovation, the building, which was erected in 1630, having become somewhat dilapidated. The building is used as a Sunday school in connection with Holy Trinity Church, and as an elementary school for infants, one portion being also occupied as the Church Institute. Improvements are to be carried out at Holy Trinity Church, Idle. It is proposed to reseat the whole of the body of the edifice with pitch pine seats, abolishing the box pews which have served to the present time. New choir stalls of pitch pine will also be added; the chancel will be laid with encaustic tiles, and the aisles relaid with concrete in tinted colours. The church will be thoroughly ventilated, and the interior painted and decorated. The above works of restoration and renovation are being



carried out under the supervision of Mr. Jowett Kendall, architect, of Idle.

**Walkden.**—The memorial-stones of a Wesleyan chapel have been laid. The new erection is estimated to cost about 3,500*l*. The building has been entrusted to Mr. J. Allen, of Radcliffe, and the plans were prepared by Mr. A. W. Smith, architect, Knowsley Street, Manchester. When completed the structure is estimated to seat 700 persons. It will be in the Renaissance style of architecture; the external facings are to be of brick dressed with terracotta and red Runcorn stone. In the interior a gallery has to be erected all round the edifice, and a minister's vestry and choir and organ apsis are to be constructed. All the fittings will be of polished pitch pine, and hot-water heating apparatus will be provided.

## NEW BUILDINGS.

**Consett.**—The town hall just erected at Consett was opened on Monday. The building has been erected from the designs of Mr. W. L. Newcombe, F.R.I.B.A. (of the firm of Messrs. Newcombe & Knowles), Newcastle. It is built of stone, in Early English style. The exterior of the building, from its size, general dimensions, is well grouped together with the tower, which rises to a height of 86 feet. Mr. Geo. Westgarth, of Newcastle, was the contractor, the clerk of works being Mr. W. Burrell, of Lanchester.

**Birmingham.**—The inscription-stone of the building of the Birmingham School of Art was laid on Saturday by Mr. Richard Tangye. The site of the new school, which has been given by a local landowner, Mr. Colmore, is a commanding one in the centre of the town, and in close proximity to the town hall, the council-house, the Mason College, the Midland Institute, the new art gallery and museum. The cost of the building itself is estimated at some 25,000*l*. The design, by the late Mr. John Henry Chamberlain, is in the Gothic style, and consists of a central block, and two wings of red brick and stone, relieved with terracotta and tile work. The work is being carried out under the direction of Mr. W. Martin.

**Darlington.**—On Wednesday Sir J. W. Pease, M.P., laid the foundation-stone of a Free Library in Crown Street, Darlington, the building being the gift of his late brother, Mr. Edward Pease. The building, which it is estimated will cost about 5,000*l*, will be in the semi-Queen Anne style, of red pressed bricks, liberally relieved with Dufton stone. The length of the main front will be about 100 feet, and the depth 90 feet; and the library, reading-room, &c., will be of large dimensions. Mr. G. G. Hoskins, of Darlington, is the architect.

## GENERAL.

**The Committee** charged with the erection of a bust to Burns in Westminster Abbey have unanimously resolved to commission Sir John Steell, R.S.A., to execute the work.

**Sir Joseph Pease, M.P.**, on Monday, unveiled at Middlesbrough a bronze statue of the late Mr. John Vaughan, partner of the late Mr. W. H. F. Bolckow. The statue is by Mr. Lawson, of London, and stands 8½ feet high on an ironstone pedestal.

**The Third Annual Exhibition** of the Leicester Society of Artists opened on Monday in the rooms of the society, St. George's Chambers, Leicester. Among the exhibitors are Mr. Alma Tadema and Miss Clara Montalba.

**The Yorkshire Fine Art and Industrial Exhibition** for the ensuing summer season was opened at York last week. The art department includes well-known pictures by the old masters belonging to the Earl of Feversham, Lady Mary Thompson, and the fine collection presented to the committee by the late Mr. Burton, of Poppleton, near York. There are also numerous high-class pictures from private collections.

**The International Exhibition at the Crystal Palace** is so far completed, both in the Industrial and Fine Art Sections, that the jury in the latter division have completed their labours. The awards, which were made *inter alios* by Mr. W. O. Orchardson, R.A., Mr. G. A. Storey, A.R.A., Mr. P. R. Morris, A.R.A., Mr. John Burr, President of the Society of British Artists, are one hundred and ninety in number, and include, for the United Kingdom, diplomas of honour to Sir Frederic Leighton, P.R.A., to Mr. S. Cousins, R.A., the Royal School of Art Needlework; and diplomas of recognition to Fine Art Society, the Graphic Collection, and to Messrs. Cassell and Company. The diplomas for foreign countries are to Japan, for a large bronze Koro and stand, the work of Ichikawa Raijiro, of Tokio; to the "Gesellschaft für Vervielfältigende Kunst," Vienna; to Adolph Holzhausen, of Vienna; to Mr. R. Schuster, of Berlin; and a diploma of honour to Mr. W. Roelofs, of Brussels. The greater number of gold, silver, and bronze medals have fallen to the United Kingdom,

France, and Germany; but the Netherlands, Belgium, Italy, and Scandinavia obtain a fair proportion.

**An Exhibition of Pictures**, belonging to the Marquis of Bute, was opened on Tuesday in the great central room of the Glasgow Corporation Galleries. The pictures in question—recently exhibited at Bethnal Green Museum—have been selected from the famous collection got together more than a hundred years ago by Lord Mountstuart, afterwards fourth Earl and first Marquis of Bute—the most important of all the collections formed in England before the French Revolution, as regards the representation of the Dutch and Flemish schools.

**Mr. James Valder**, the engraver who chased the beautifully-executed portraits on the Wellington Shield, which was presented to the Duke of Wellington in 1823, died last week at his residence, Newington, Hythe, in his eighty-eighth year. The shield, which is a massive work in silver richly gilt, with a diameter of 3 feet 8 inches, was executed from designs made for the purpose by the Royal Academician Stothard, and was stated to have cost 15,000*l*.

**The Sum** of 7,062*l*. has been subscribed towards the cost of restoring and enlarging Dewsbury parish church. About as much more is required, exclusive of what is needed to raise the tower another stage.

**The Convent of Letraki**, in the suburbs of Athens, has offered the English Ambassador a piece of ground of over 6,000 square metres for the English School of Archaeology.

**The Annual Conversazione** of the Institution of Civil Engineers was held last week. Sir J. W. Bazalgette, the president, and Lady Bazalgette received the company, numbering some three thousand persons, at the South Kensington Museum.

**Mr. John Price, Assoc. M.Inst., C.E.**, engineer and surveyor to the Barton-upon-Irwell Sanitary Authority, has recently been appointed surveyor to the Toxteth Park Local Board, at a salary of 350*l*. per annum. There were 140 candidates, and out of this number the following four were selected along with Mr. Price for consideration by the Board, viz., Mr. Armitage, chief assistant, Borough Engineer's Office, Preston; Mr. S. G. Gamble, Assoc. Inst., C.E., borough surveyor, Grantham; and Messrs. Goldshaw & Wood, of the City Engineer's Office, Liverpool.

**Mr. H. T. Wakelam**, late borough surveyor of Oswestry, has been appointed borough surveyor of High Wycombe. The town of Oswestry has apparently lost the services of a good officer by economising at his expense.

**Mr. R. Yates**, architect, has prepared plans for the erection of a school at Wrockwardine.

**The Members** of the archaeological section of the Birmingham and Midland Institute began their summer excursions last week with a visit to Hereford Cathedral. Visits were also made to places of interest in the neighbourhood, and among others to Kilpeck Church and Castle. The church is probably the most perfect example of a Norman church in England, retaining a curious vaulted semicircular apse. The south door is elaborately carved with numberless fanciful devices, the pews enriched with full-length figures, affording valuable examples of early costume. The chancel arch and the corbel tables surrounding the building are also curiously carved, and at the west end are enormous heads, apparently intended for those of crocodiles.

**The Executive Committee** of the Carlisle Church Congress, 1884, has purchased the Circus which stands on the Warwick Road for 519*l*, upon the valuation of Mr. George D. Oliver, architect, to whom the question of the value was referred as arbitrator. The Circus will be transformed into the Congress Hall, in which the principal meetings will be held, and the Drill Hall will be used for meetings of the second class.

**The Caradoc Field Club** have held their first meeting for the season at Shrewsbury, whence the members started to Condover. Among the places visited was Plaish Hall, where the visitors inspected the banqueting-hall, with its music gallery; the inlaid wainscot of the drawing-room, and other old oak carving, as well as the curious arrangement of the attics and the chimneys, for which the building is especially remarkable.

**The Workington School Board** have adopted plans, prepared by Mr. George D. Oliver, of Carlisle and Workington, for a group of schools, accommodating 800 children in three departments, together with a master's residence.

**The Liverpool City Council** on Wednesday resolved to purchase, at a cost of 200,000*l*, an open space in the suburbs known as Kensington Fields, about 50 acres in extent. The Corporation feared that the land would pass into the hands of the speculative builder, and they are taking it with a view to the erection of "middle-class residences of a substantial kind."

**At a Meeting** of the Hanley, Stoke, and Fenton joint-committee for the erection of a contagious diseases hospital, Mr. G. W. Bradford, of Hanley, was appointed architect of the proposed hospital, to be erected near Bucknall, at a cost not to exceed 4,000*l*, of which 750*l*. has already been expended in the purchase of the site.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JUNE 7, 1884.

### COMPETITIONS OPEN.

**BURNLEY.**—July 1.—Plans are required for the Erection of Municipal Buildings, Police Courts, and Baths. Premiums of 200, 100, and 50 guineas. Mr. J. E. Stafford, C.E., Borough Engineer, Burnley.

**LINCOLN.**—The Committee for the Lincoln School of Science and Art invite Architects to submit Plans for a New School of Science and Art. A First Premium of £100, a second of £50, and a third of £25 will be awarded. The Committee will employ a competent Architect to advise them upon the Plans. Mr. Francis R. Larken, Hon. Secretary, Cantilupe Chantry, Lincoln.

### CONTRACTS OPEN.

**ABERDARE.**—June 10.—For Repairs to Church of St. Elvan. Mr. T. Nicholson, Architect, Hereford.

**ABERDEEN.**—June 7.—For Constructing Bridge over Upper Denburn Street. Mr. Boulton, Surveyor, Town House, Aberdeen.

**ACKTON.**—June 12.—For Additions to Board School. Mr. John Bramley, Ackton, near Pontefract.

**ARMAGH.**—June 21.—For Building Manse. Mr. J. H. Fullerton, Architect, Armagh.

**ARNSIDE.**—June 10.—For Rebuilding West End of Church. Mr. S. Shaw, Architect, Kendal.

**BELFAST.**—June 12.—For Building Semi-detached Villas, Jordanstown. Mr. Close, Architect, 53 Waring Street, Belfast.

**BIRKENHEAD.**—June 16.—For Building Sessions Court, &c., Chester Street. Messrs. T. D. Barry & Son, Architects, Commerce Court, Lord Street, Liverpool.

**BLACKWOOD.**—June 9.—For Additions to Chapel. Messrs. Lawrence & Rosser, Architects, 1 Tredegar Place, Newport, Mon.

**BOURNEMOUTH.**—June 28.—For Erection of Sanitary Hospital and Buildings and Works in connection, Iron Fencing, Sewers, &c. Mr. G. R. Andrews, Surveyor, Town Hall Chambers, Bournemouth.

**BRADFORD.**—June 9.—For Building Shop Premises. Mr. R. Calvert, Architect, 9 New Kirkgate, Bradford.

**BURNLEY.**—June 9.—For Erection of Farm Buildings and Villa Residences, Lower Readley Estate. Messrs. W. Waddington & Son, Architects, 5 Grimshawe Street, Burnley.

**CAMBRIDGE.**—June 17.—For Construction of Carriage Bridge over Hobson's Stream. Mr. W. J. Bowyer, Surveyor, Commissioners' Offices, Guildhall, Cambridge.

**CARDIFF.**—June 10.—For Additions to Premises, Dute Docks. Mr. John P. Jones, Architect, 26 Park Street, Cardiff.

**CARLISLE.**—June 9.—For Building the Border Counties Home for Incurables. Mr. G. D. Oliver, Architect, Bank Chambers, Carlisle.

**CARLISLE.**—June 10.—For Building Two Semi-detached Villas. Mr. J. Murchie, Architect, Carlisle.

**DAWLISH.**—June 12.—For Building School and Class-rooms, &c., adjoining Congregational Church. Mr. G. Soudon Bridgman, Architect, 67 Fleet Street, Torquay.

**DONCASTER.**—June 7.—For Building Post Office. Messrs. Wilson & Masters, Architects, Hartshead Chambers, Sheffield.

**DUNDALK.**—June 15.—For New House and Stores, for Mrs. Agnew, Jocelyn Street. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

**DUNDALK.**—June 15.—For Two Dwelling-houses, Barrack Street, for Captain Adair. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

**DUNDALK.**—June 15.—For New Schools, New Teachers' House, Boundary Walls, New Stables, &c., for Presbyterian Congregation. Mr. W. I. Chambers, Architect, Dublin.

**DURHAM.**—June 14.—For Additions to certain County Police Stations. The County Architect, Durham.

**ENNISCORTHY.**—June 20.—For Additions to District Lunatic Asylum. Mr. Morley, Building Surveyor, Commercial Buildings, Dublin.

**GARFORTH.**—June 13.—For Erection of House, Shop, Warehouse, Stable, and other Buildings. Messrs. W. Richardson & Son, Architects, 13 Park Square, Leeds.

**GLOUCESTER.**—June 13.—For Taking Down and Rebuilding Hospital in Stroud Road. Mr. R. READ, City Surveyor, Coin Exchange, Gloucester.

**GRAVESEND.**—June 7.—For Building Schools for 450 Children. Mr. W. F. Gosling, Architect, 9 Walbrook, E.C.

**HAMPTON WICK.**—June 7.—For Erection of Local Board Room. Mr. R. T. Elsam, Architect, Westbourne Villa, Hampton Wick.

**HARROGATE.**—June 10.—For Building Presbyterian Church. Mr. W. Lister Newcombe, Architect, 89 Pilgrim Street, Newcastle-on-Tyne.

**HORSFORTH.**—June 7.—For Construction of Pipe Sewers (2,705 yards), with Manholes, Ventilators, &c. Mr. W. B. Woodhead, C.E., 65 Market Street, Bradford.

**KETTERING.**—June 26.—For Construction of Brick Sewers and Removal and Reconstruction of Outfall Works. Mr. R. W. Johnson, Surveyor, 1 George Street, Kettering.

**LANCASTER.**—June 16.—For Building School, Laundry, Swimming Bath, &c., Ripley Hospital. Mr. W. Wright, Surveyor, Lancaster.

**LEEDS.**—June 18.—For Construction of Sewers. Mr. T. Hewson, Borough Engineer, Municipal Buildings, Calverley Street, Leeds.

**LEEK.**—June 16.—For Building Boys' School for the Governors of St. Edward's Church. Mr. J. G. Smith, St. Edward Street, Leek.

**LIMERICK.**—June 7.—For Building Chapel. Mr. W. Hague, Architect, 62 Dawson Street, Dublin.

**MARKET RASEN.**—June 7.—For Works to Parish Church Tower. Messrs. Charles Kirk & Sons, Architects, Sleaford.

**NANTYGLO.**—June 14.—For Building School for 331 Children. Messrs. Blesley & Aspinall, Architects, Guildhall Chambers, St. Mary Street, Cardiff.

**NETHERTON.**—June 12.—For Erection of Schools and Caretaker's House, and Enlargement of Infant School at Dudley. Mr. J. B. Marsh, Architect, 202 Wolverhampton Street, Dudley.

**PLYMOUTH.**—June 9.—For Additions to Board Schools. Messrs. Hine & Odgers, Architects, Lockyer Street, Plymouth.

**ULVERSTONE.**—June 14.—For Building School. Mr. J. W. Grundy, Architect, Ulverstone.

**WATFORD.**—June 14.—For Building School and Alterations to existing School. Mr. W. H. Syme, Architect, 52 High Street, Watford.

**WROBLEY.**—June 14.—For Additions to Police Station. Mr. W. Chefake, County Surveyor, Hereford.

### TENDERS.

#### ABBEYLEIX.

For New House, for Lord de Vespi, Abbeyleix. Mr. W. I. Chambers, Architect, Dublin.  
HARRIS, Monasterevan (accepted) . . . £1,800 0 0  
Plumbing, Heating, Grates, Mantles, and Hardware extra.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

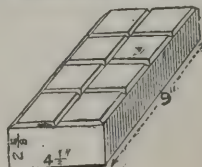
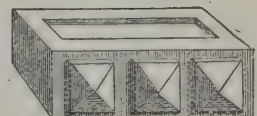
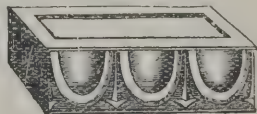
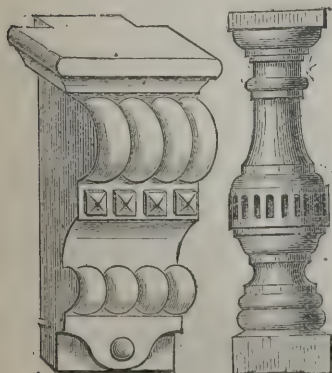
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## ABERDEEN.

For Cottage in Argyll Place, Aberdeen. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.  
Mitchell & Co., mason.  
Smith & Toimie, carpenter and joiner.  
Pirie, slater.  
Simpson & Rae, plasterer.  
Munro, plumber and gas-fitter.  
Mason & Sons, painter and glazier.

## AUDENSHAW.

For Sewering and Draining Dale Street and Water Street, Audenshaw. Mr. J. H. BURTON, Surveyor, Warrington Street, Ashton-under-Lyne.  
BEARD, Bradford, near Manchester (accepted per schedule of prices).  
Nine tenders were received.

## BATLEY.

For Cleaning, Painting, and Decorating of the Wesleyan Chapel, Hick Lane, Batley. Mr. J. T. LAW, Architect, 64 Commercial Street, Batley.  
KERSHAW, Batley (accepted) . . . £200 0 0

For Additions to a House in Brunswick Street, Batley, for Mr. Samuel Clegg. Mr. J. T. LAW, Architect, 64 Commercial Street, Batley.

## Accepted Tenders.

Goodall, Batley, mason . . . £52 0 0  
North, Batley, joiner . . . 28 10 0  
Hargreaves, Dewsbury, slater . . . 3 10 0  
Firth, Batley, plumber . . . 7 13 0  
Rothery, Batley, plasterer . . . 7 0 0

For Building Two Dwelling-houses in Surrey Street, Batley, for Mr. Alfred Talbot. Mr. J. T. LAW, Architect, 64 Commercial Street, Batley.

## Masons.

Willans, Birstal . . . £385 10 0  
Hepworth, Batley . . . 356 0 0  
Pooth & Son, Batley . . . 393 0 0  
Hart & Brier, Dewsbury . . . 350 0 0  
Webster, Batley . . . 348 0 0  
Chadwick & Sons, Staincliffe . . . 340 0 0  
Kilburn & Wainwright, Batley-Carr . . . 335 10 0  
Kitson, Batley-Carr . . . 335 0 0  
Robinson, Batley . . . 335 0 0  
J. & B. Farrar, Birstal . . . 332 0 0  
North, Batley . . . 326 0 0  
Goodall, Batley . . . 320 0 0  
Nettleton & Goldthorp, Batley . . . 301 12 4  
BAINES, Batley (accepted) . . . 309 0 0

## Joiners.

Chadwick & Sons, Staincliffe . . . 180 0 0  
Yates, Birstal . . . 165 2 11  
Ingle, West Ardsley . . . 155 0 0  
North, Batley . . . 154 0 0  
Lyles & Smith, Batley-Carr . . . 153 0 0  
Pothergill & Schofield, Dewsbury . . . 151 0 0  
Illingworth, White Lee . . . 145 16 0  
Ackroyd & Son, Birstal . . . 145 12 0  
Kay & Scates, Batley . . . 140 0 0  
Charlesworth, Batley . . . 138 0 0  
Brook & Sons, Ossett . . . 136 0 0  
Armitage & Son, Dewsbury . . . 134 0 0  
Garthwaite & Blackburn, Dewsbury . . . 134 0 0  
Brown, Gomersal . . . 133 10 0  
BROOKE, Batley (accepted) . . . 133 0 0  
Fozard, Batley . . . 125 10 0

## Slaters.

Rhodes, Birstal . . . 39 10 0  
Watson, Worsnop, & Co., Leeds . . . 32 15 0  
Thompson, Dewsbury . . . 31 0 0  
Brear, Dewsbury . . . 29 0 0  
Thornton, Heckmondwike . . . 29 15 0  
Pickles Bros., Leeds . . . 28 9 0  
HARGREAVES, Dewsbury (accepted) . . . 28 0 0

## Plumbers and Glaziers.

Armitage, Birstal . . . 21 15 8  
Talbot, Batley . . . 20 14 1  
Saxton, Batley . . . 18 16 6  
Hustwitt, Batley . . . 18 0 0  
Snowden, Ossett . . . 17 15 0  
Firth, Birstal . . . 17 3 6  
Senior, Batley . . . 16 10 0  
Waller, Batley-Carr . . . 16 0 0  
Walshaw, Batley . . . 15 15 0  
Walker, Heckmondwike . . . 15 10 0  
Firth, Batley . . . 15 10 0  
Brook, Heckmondwike . . . 15 5 0  
Jessop, Batley . . . 15 0 0  
LISTER, Birstal (accepted) . . . 14 5 0

## Plasterers.

Broadbent, Dewsbury . . . 30 10 0  
Morton, Cleckheaton . . . 31 10 0  
Grange & Cookson, Heckmondwike . . . 30 0 0  
Metcalfe & Lockwood . . . 29 10 0  
Parker, Heckmondwike . . . 29 0 0  
Crawshaw, Batley . . . 28 10 0  
ROTHERY (accepted) . . . 24 0 5

## BLAYDON.

For Building Warehouse at Blaydon, for the Ryhope Colliery Industrial and Provident Society. Quantities by Mr. G. D. Irwin, Sunderland.  
Moir, Hendon Grange, Sunderland . . . £600 0 0

## BROMYARD.

For Erection of School Buildings and Master's House, Bromyard. Mr. A. HILL PARKER, Architect, Worcester. Quantities by the Architect.  
Penson, Hereford . . . £1,619 6 0  
Bourne, Worcester . . . 1,566 0 0  
Kendrick, Worcester . . . 1,538 0 0  
Wood & Sons, Worcester . . . 1,525 0 0  
Lewis, Bromyard . . . 1,489 10 0  
Inwood, Malvern . . . 1,459 0 0  
Wells & Son, Worcester . . . 1,441 11 9  
Welsh, Hereford . . . 1,399 0 0  
JONES, Gloucester (accepted) . . . 1,343 0 0

## CALDMORE.

For Two Retail Shops and Premises, for Mr. Samuel Allen, at Caldmore, Walsall. Mr. P. ADSHEAD, Architect.  
Mann . . . £745 0 0  
Wistance . . . 745 0 0  
Lynex . . . 729 0 0  
Adkins . . . 727 10 0  
TAYLOR (accepted) . . . 699 0 0

## CARDIFF.

For Putting into Repair Llanannor Court, near Cardiff, for Sir J. L. Spearman, Bart. Mr. JOHN P. JONES, Architect, 26 Park Street, Cardiff.  
JAMES, Cowbridge (accepted) . . . £410 0 0

## CARLISLE.

For Additions, &c., to the Red Lion Hotel, Carlisle, for Mr. S. Boustead. Mr. JAMES MURCHIE, Architect, Carlisle.  
Wright, joiner . . . £747 0 0  
Anderson, plumber . . . 123 0 0  
Johnson, plasterer . . . 150 0 0  
Westray, painter, &c. . . 49 10 0

Total . . . £1,069 10 0

## CELBRIDGE.

For Cementing Portion of the Workhouse Buildings, Celbridge.  
Kearney, Dublin . . . £57 0 0  
MALONE, Celbridge (accepted) . . . 41 0 0  
Maquire, Celbridge . . . 34 10 0

## GORTON.

For Building Two Cottages and Alterations to House and Shop in Wellington Street, Gorton, for the Droylesden Co-operative Society. Mr. F. Smith, Architect. Quantities by the Architect.

Cheetham, Irlams-o'-th'-Height . . . £368 0 0  
Harrison, Manchester . . . 604 0 0  
Bates, Droylesden . . . 616 0 0  
Shaw, Manchester . . . 604 0 0  
Wright, Clayton . . . 603 0 0  
Fielding, Droylesden . . . 581 4 5  
Cane, Manchester . . . 579 0 0  
Davison & Carr, Manchester . . . 562 0 0  
M'Farlane, Manchester . . . 555 0 0  
Chadwick, Clayton . . . 536 0 0  
Hurst, Droylesden . . . 522 10 0  
ROBINSON, Manchester (accepted) . . . 512 10 0

## HEREFORD.

For Restoration of St. Peter's Church, Hereford.  
Welsh . . . £3,284 0 0  
Beavan & Hodges . . . 3,250 0 0  
Cullis . . . 2,300 0 0

## IRVINE.

For Re-causewaying part of Bridgegate, Irvine.  
REID, Kilmarnock (accepted) . . . £814 0 0

## KEIGHLEY.

For Construction of Conduit (75 yards long) at Black Hill Reservoir. Mr. W. H. HOPKINSON, Borough Engineer.  
W. Hillary & Son, Utley . . . £205 0 0  
Barwick, Hillary & Dewhurst, Ingrow . . . 185 0 0  
A. & J. Smith, Utley . . . 177 0 0  
HOLLIES, Keighley (accepted) . . . 174 0 0  
Tempest, Keighley . . . 174 0 0  
Engineer's estimate . . . 183 0 0

## KENDAL.

For New Organ Works, Kendal. Mr. ELI COX, Architect, Kendal.

## Mason.

Hutton, Kendal.  
Carpenter and Joiner.  
Nelson & Son, Kendal.

## Slating.

Goulding, Kendal.  
Plumber, Glazier, and Painter.  
Jackson, Kendal.

## Plasterer.

Armstrong, Windermere.

These organ works are being built by Messrs. Wilkinson & Son, organ builders, Kendal, under the superintendence of Mr. Eli Cox, architect. Total cost, £5,000, including site and fittings.

## LONDON.

For the Erection of New Colonial Warehouses in High Street, Wapping, for Messrs. Banes, Noel & Co. Mr. HORACE A. ALEXANDER, Architect, 72 Cannon Street, E.C. Quantities by Mr. E. A. B. CROCKETT, 16 Mark Lane, E.C.

Ahley . . . £21,109 0 0  
Smith & Co. . . 20,860 0 0  
Lawrance & Sons . . . 20,450 0 0  
Holland & Hannen . . . 19,980 0 0  
Outhwaite & Son . . . 19,980 0 0  
Rider & Sons . . . 19,718 0 0  
Conder . . . 19,660 0 0  
Patrick & Son . . . 19,522 0 0  
Kirk & Randall . . . 19,361 0 0  
Morter . . . 19,321 0 0  
Greenwood . . . 19,300 0 0  
Bangs & Co. . . 19,135 0 0  
Bywaters . . . 18,970 0 0  
Colls & Sons . . . 18,851 0 0  
Ashby & Horner . . . 18,780 0 0  
Brass . . . 18,277 0 0

## MARDEN.

For the Restoration of the Tower and Nave of the Parish Church, Marden, near Devizes, and the addition of a Vestry and Organ-chamber. Mr. C. E. PONTING, Architect, Marlborough.  
Vallis, Frome Selwood . . . £1,475 10 0  
Light & Smith, Chippenham . . . 1,366 0 0  
Restall & Son, Bisleigh . . . 1,307 3 6  
Eoskings, Hungerford . . . 1,273 0 0  
Architect's Estimate . . . 1,295 0 0

## MITCHAM.

For the Erection of a Cooking Apparatus at the Schools at Mitcham, Surrey, for the Guardians of the Poor of the Holborn Union. Messrs. H. SAXON SNELL & SON, Architects, 22 Southampton Buildings, London.  
Willcox & Co. . . £107 10 0  
Barford & Perkins . . . 86 15 0  
MAY BROS. (accepted) . . . 60 0 0

## ODIHAM.

For Repairs to Roof of Parish Church, Odiham. Mr. CHARLES SMITH, Architect, Reading.  
Simmonds . . . £501 0 0  
Wernham . . . 479 0 0  
Higgs . . . 459 0 0  
Kingerlee . . . 413 0 0  
Spear & King . . . 389 0 0  
Pool & Sons . . . 377 0 0  
Searle . . . 305 0 0  
LINING BROS. (accepted) . . . 276 10 0

## OLDHAM.

For Building Workhouse Schools, Oldham, for the Oldham Board of Guardians. Mr. ALEXANDER BANKS, Architect. Quantities by the Architect.  
Percy, Wright & Sons, Manchester . . . £17,935 0 0  
Whitell, Manchester . . . 10,288 0 0  
Dyson & Sons, Oldham . . . 10,079 0 0  
Hiller, Fleetwood . . . 10,045 0 0  
Neill & Sons, Manchester . . . 10,037 0 0  
T. Whittaker, Royton . . . 10,000 0 0  
Schofield & Sons, Oldham . . . 9,436 0 0  
Lees, Oldham . . . 9,400 0 0  
Ashton & Sons, Oldham . . . 9,139 0 0  
W. Whittaker, Oldham . . . 9,120 0 0  
Executors of the late E. WHITTAKER, Oldham (accepted) . . . 9,050 0 0

## OXFORD.

For Building Infectious Diseases Hospital, Oxford. Mr. W. H. WHITE, Architect. Quantities by the Architect.  
Claridge, Banbury . . . £9,175 0 0  
Moss, Oxford . . . 8,995 19 2  
Selby, Oxford . . . 8,110 0 0  
Bell & Sons, Saffron Walden . . . 7,927 0 0  
Wilkins & Sons, Oxford . . . 7,790 0 0  
Dover, Oxford . . . 7,790 0 0  
KINGERLEE, Oxford (accepted) . . . 7,258 0 0

For Restoring Masonry of Tower and North Aisle of the Church of St. Martin Stratford, Oxford, and in Repairing and Re-laying the Roofs of such parts of the said Church, and other Work. Mr. E. G. BRUTON, Architect, Oxford.

Poole, Woburn Sands . . . £550 0 0  
Edwards, Egginton . . . 425 0 0  
Minns, Leighton Buzzard . . . 420 0 0  
Warren, Fenny Stratford . . . 395 10 0  
Wilford Bros., Newport Pagnell . . . 390 0 0  
Heath, Towcester . . . 380 0 0  
Welsh & Son, Fenny Stratford . . . 375 0 0  
Gates, Fenny Stratford . . . 372 10 0  
Kingerlee, Oxford . . . 365 0 0  
WARREN & SON, Fenny Stratford (accepted) . . . 325 10 0

## PATRICROFT.

For the Erection of Separate Cell Vagrant Wards on Premises attached to the Workhouse, Patricroft, for the Burton-on-Irwell Board of Guardians. Quantities supplied by the Architect, Mr. JOHN PRICE, Assoc. M. Inst. C.E.  
J. & P. Cain, Stratford . . . £1,000 0 0  
Moore & Sons, Eccles . . . 998 0 0  
Roper, Patricroft . . . 966 18 0  
Brown, Salford . . . 950 0 0  
BROOKES & SON, Patricroft (accepted) . . . 945 12 3

## RAMSGATE.

For Alterations and Additions to Christ Church Schools, Ramsgate, Kent. Mr. E. L. ELGAR, Architect, 12 Harbour Street, Ramsgate. Quantities by the Architect.  
Miller . . . £618 0 0  
Claris . . . 590 0 0  
Horne . . . 590 0 0  
Bowman . . . 573 10 0  
Port . . . 570 0 0  
Smith . . . 506 0 0  
White Bros. . . 470 0 0  
Newby . . . 465 0 0  
Newby Bros. . . 448 0 0

## RINGSTOWN.

For Building House at Ringstown, near Mounbrath. Mr. WILLIAM I. CHAMBERS, Architect, 5 Westmoreland Street, Dublin.  
ROB (accepted) . . . £585 0 0  
There were ten estimates, ranging from £1,000 to the above down.

## ROTHERHAM.

Street Works, Rotherham.  
Kell . . . £299 0 0  
Ripley . . . 200 0 0  
Morton . . . 194 0 0  
Hill . . . 193 0 0  
Pugh . . . 190 0 0  
H. Wake . . . 188 0 0  
R. H. WAKE (accepted) . . . 185 0 0  
Borough Surveyor's Estimate . . . 196 10 0

## SADDLEWORTH.

For Building Independent Methodist Sunday Schools, Delph, Saddleworth. Mr. ALEXANDER BANKS, Architect. Quantities by the Architect.  
Accepted Tenders.  
Winterbottom, Delph, stonework, brickwork, and slating.  
Hewkin Bros., carpenter and joiner.  
Whitehead, Dobcross, plastering.  
Wood, Delph, plumbing, glazing, painting, and gasfitting.



ROWLEY REGIS.

For Enlargement of Blackheath School for the Rowley Regis School Board, for 110 Children in Girls' Department. Mr. J. T. MEREDITH, Architect, Kidderminster.

Bate, Dudley	£800 0 0
Holland & Son, Dudley	720 0 0
Round, Oldbury	710 0 0
Harley & Son, Smethwick	700 0 0
Allen, Birmingham	690 0 0
Trow & Son, Wednesbury	667 0 0
Willetts, Old Hill	629 0 0
Dorse & Son, Cradley Heath	580 0 0
Cockin & Son, Old Hill (accepted)	566 0 0

SOUTHAMPTON.

For Drainage Works in Rockstone Place, Southampton. Mr. W. B. G. BENNETT, Borough Surveyor.

Laver	£157 0 0
Bull & Sons	139 0 0
Martin	137 0 0
Crook (accepted)	133 10 0
Crook & Smith	120 0 0

SOUTHPORT.

For Additions to the Mornington Road Wesleyan Schools, Southport. Messrs. MAXWELL, TUKE & HURST, Architects.

BRIDGE, Burscough (accepted)	£4,400 0 0
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SPALDING.

For Erection of Outbuildings at Farm, Moulton Marsh, for the Governors of the Endowed School.

Gilder, Holbeach	£86 15 0
Fawer, Holbeach	86 10 0
Moore, jun., Spalding	80 0 0
King & Sewell, Moulton	79 17 0
Decamps, Moulton	79 5 0
BATEMAN, Gedney (accepted)	78 0 0

SPILSBY.

For Construction of 18-inch Pipe Sewer (500 feet), Spilsby. Mr. E. J. BUTCHER, Surveyor.

Eyre & Andrews, Bratoff	£119 19 0
Hobson, Hogsthorpe	117 0 0
Hibbitt, Alford	98 1 10
Dunkley, Skegness	93 0 0
Turner, Wainfleet	89 6 6

STONEY STANTON.

For Eight Houses at Stoney Stanton for Mr. Thomas Lasey. Mr. J. WELLS, Architect, Hinckley.

T. & G. Harrold, Hinckley	£1,594 0 0
Foxon, Hinckley	1,225 15 0
Goodman, Hinckley	1,230 0 0
J. & W. Harrold, Hinckley	1,232 0 0
Shilton, Stoke	1,210 0 0
NORTON, Stoney Stanton (accepted)	1,200 0 0

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WEST HARTLEPOOL.

For Building Wesleyan Day Schools, West Hartlepool. Mr. R. DUNIPACE, Architect, West Hartlepool. Quantities not supplied.

Wheelwright & Miller	£1,194 0 0
SUGGITT & SON (accepted)	1,035 0 0
Mooly & Burton	1,006 9 0
Howe	1,001 10 0
Harrison	883 18 4

WORTHING.

For Construction of Tarring Road Sewer, for Worthing. Mr. WALTER HORNE, Surveyor.

Mills, Worthing	£739 11 6
Munnery, Worthing	628 14 6
Twine, Worthing	601 14 6
Fort, Buckle & Co., Leicester	595 12 9
Hayter, Portsmouth	586 8 0
Bell, Wood Green	585 10 0
Blaker, Worthing	573 18 0
Dearle, Eastbourne	568 6 0
Sandell, Worthing	540 10 0
Standing, Worthing	531 4 0
HALL & Co., Portsmouth (accepted)	506 7 0
Ovet, Worthing	419 4 0
Surveyor's estimate	512 0 0

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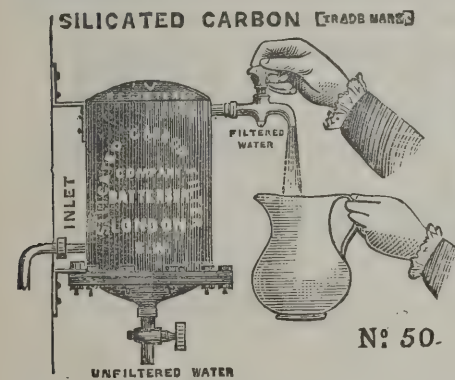
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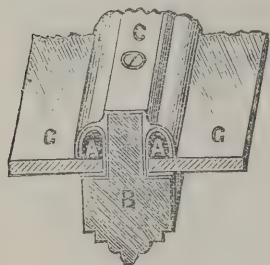


Fig. 1 is Section of Roof—A A are Side Slips fitting tightly on the edges of the Glass, and filled with prepared Putty that will not dry or harden. C is Cap in zinc, copper, or lead, showing allowance for Side Slips to expand or contract with the Glass, G. B is Bar of Wood or Iron.

Fig. 2 shows Section of Roof.

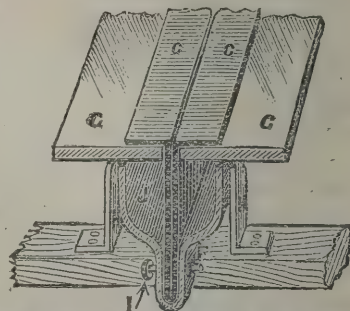
C—Lead, Zinc, Copper. 1 Brass Flanges folded down on Glass.

F—Perspective view of Patent Iron, Zinc, or Steel Bar, with Lead folded down on Glass.

H—Chair for fixing Bars to Purlins when required.

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# The Architect.

## THE CLOSING MEETING OF THE INSTITUTE OF ARCHITECTS.



THE Long Vacation of the Institute commenced on Monday night a few minutes before ten, and will last until the third day of next November at eight o'clock. In making the formal announcement of this somewhat leisurely arrangement, the President, Mr. CHRISTIAN, very properly expressed the hope that at the close of the interval of rest he might find the members returning to work refreshed by a thorough enjoyment of their repose. We sincerely echo the Presidential utterance, and with this addition—that we

trust the gentlemen thus graciously released from the labours of academical life may do as much work in the next session as they have done in the last, and, if they wish, a little more. Our readers are aware that the administrative arrangements of the Institute are now being overhauled by a committee of reform; perhaps amongst the rest it might not be amiss if this tribunal were to inquire what is the necessity for the affectation of suspending proceedings for five months at a time, to say nothing of other holidays, by way of affording annual relaxation to men of business whose real holiday consists, like other people's, in a few weeks snatched from their daily work in the autumn.

The meeting of Monday evening, we regret to say, was not a satisfactory one. The programme was promising. Mr. BUTTERFIELD was to be presented with Her Majesty's annual gold medal, and Mr. WOOD "of Ephesus" was to give an account of his recent operations upon the site of great DIANA'S Temple. Mr. BUTTERFIELD (to use vernacular phraseology) did not turn up; and Mr. WOOD's demonstration ended, and indeed began, in that most unprofitable of all collisions architectural, a difference of opinion with Mr. FERGUSSON.

We ought not to omit to mention that the ordinary medals given annually to students were also to be presented; and, in fact, this part of the proceedings was all that could be called successful. Mr. CHRISTIAN, when speaking of the work of students, always displays a certain genial enthusiasm which carries one away in an irresistible manner. It is as if, after bearing in his own person the burden and heat of the day—for he is no carpet knight—he were rejoicing unwearied still in the remembrance of the jubilant vigour of the morning. As one of the pioneers, in fact, of the "sketchmanship" of the age, he prefers to regard the young men before him as every one a sketcher such as he himself once was. "Spend your last shilling," he says to them, therefore, in sketching; and, with a certain grain of salt, the counsel is good in these days. For these are artistic days emphatically in English architecture, and it seems very likely that for a good many years now to come the progress of the rising generation of architects, in the direction of their public usefulness, must be more and more bound up in sketching, or, in other words, in that particular dexterity of artistic touch which constant and enthusiastic exercise in free-hand drawing of the freest can alone produce. At the same time we will ask Mr. CHRISTIAN to allow us to remark on his behalf that when the last shilling is expended in sketching, it is to be hoped that the sketcher has not forgotten to expend a shilling or two before the last upon certain subjects of study which may be called a little more substantial, if not even more essential.

When the recipient of the Royal Gold Medal of the Institute is a gentleman who, although in good health, is too "retiring" to attend in person to receive it, the situation (not to put too fine a point upon it) is a trifle wanting in muscularity. Strangers and others of the comparatively uninitiated sort who were present on Monday evening may well be excused if they opened their eyes a little on being told that the distinguished architect of All Saints' Church in Margaret Street and Keble College at Oxford had expressly bargained with the Council that if he were to be expected to do such a thing as attend a meeting at Conduit Street he must not be asked to accept the

medal! This may remind us of another distinguished personage, equally "retiring" in his way, who actually threw the medal, we may say, like Mr. WHISTLER's famous paint-pot, at the head of the public, with a contemptuous demand to know whether *that* was "a time to be giving and receiving medals." Nay, in the minds of the more flippant amongst us, even the "happy thought" of our sprightly BURGESS may perchance come up again in which the "blue ribbon" of English architecture was proposed to be "shot for by the Artists' Corps." All this, in a word, is at the least undignified; and Mr. BUTTERFIELD might at any rate have gone so far in the direction of social courtesy as to induce his medical man to recommend him, in some supposed state of his nervous system, to avoid the risk of emotion.

The Council, however, did their best in the circumstances. Mr. PENROSE, the immediately preceding gold medallist, was engaged to appear as the recipient's agent; the President had written a very nice little address, which he very nicely delivered; a copy of this document was handed over with the medal, to represent the utterance which ought to have taken place in the recipient's proper presence; Mr. PENROSE made a gracious reply; and everybody consented to forgive, if they could scarcely forget, the extreme bashfulness of a great Gothic artist. It is at least satisfactory to feel that there is probably no one else amongst the Mediævalist brotherhood who would exhibit the same unflattering timorousness in the same flattering situation.

Mr. WOOD, as we have said, has fallen out with Mr. FERGUSSON about the Temple at Ephesus. Of course it was Mr. FERGUSSON who fell out with him first. The energetic author of the "History of Architecture" is a man who reserves to himself the right divine of forming opinions of his own and expressing them in his own way, no man daring, if he be wise, to try to make him afraid. No doubt it is customary with some intelligences of the higher order to defer a little, in a question of intellectual specialty, to the opinions of the specialist. He may be wrong, but a certain delicacy is felt in telling him so; he has created a new item of knowledge, and he is considered to have a sort of right to dictate about it, and much more to object to be dictated to. But Mr. FERGUSSON, at any rate, may be said to accept this rule within strictly rational limits. In architectural criticism, to which he has unquestionably rendered wonderfully good service, he is especially independent. He is not in any way an architect, and in every way a great amateur. From professional prejudices and traditional trammels he is consequently free, and he adds to this relief the further freedom of a remarkably powerful scientific mind. He seems to feel that life is not long enough to be wasted in mere amenities, and that the compromise of his own casual opinions is the compromise of immortal truth. Those who differ with him—or from whom he differs—must take him therefore as he is, and make what excuse they may for his vehemence in recognition of his value. Accordingly, when Mr. WOOD, in dealing with the well-known passage in PLINY which describes the great Ephesian temple as having possessed one hundred and twenty-seven columns the gifts of kings, is constrained to read it in the sense that there were one hundred columns, twenty-seven of which were the gifts of kings, as the only means of making other conditions fit together, we cannot wonder, first, that Mr. FERGUSSON should try his hand at some other solution of the enigma, or, secondly, that having in his own opinion found it, he should scout Mr. WOOD's hypothesis with characteristic scorn. But when Mr. FERGUSSON in his turn, in order to accommodate the singularly odd number of one hundred and twenty-seven columns on the plan of a Greek temple, in which it is primarily held to be an essential condition of Classic symmetry that the axial line shall cut the entire columnar arrangement into perfect halves, resorts to the bold contrivance, while making the pronaos or front portico a range of eight columns (so described specifically by VITRUVIUS) according to rule, gives to the posticum or rearward portico *nine* columns, in defiance of the very foremost of all the architectural principles that we have been accustomed to rely upon in Classic design, it need not surprise us to find Mr. WOOD groaning in spirit to see the result of his lifetime's labour in a great critic delivering criticism like this, and a professional public listening to it without impatience. Accordingly, Mr. WOOD's expected description of his findings at Ephesus turned out to be an emphatic assault upon Mr. FERGUSSON's "restoration." In reply to this the Secretary was somehow furnished



with a much more emphatic communication from Mr. FERGUSSON attacking Mr. WOOD's restoration. The meeting was vastly amused, of course, and perhaps it was wise in the Chairman quickly to apply the *détour* to a debate which might have followed up the controversy somewhat inconveniently. Probably the best way out of the difficulty is to suppose it possible that the excellent PLINY himself had made a slight mistake in his numerals, and, while thanking Mr. FERGUSSON for his too ingenious calculation, to leave Mr. WOOD for the present in possession of the field which is his own. The majority of architects will certainly prefer to let the question thus remain for a long time to come, rather than accept the suggestion that, even in the age of ALEXANDER THE GREAT, a Greek temple, the most splendid in the world, could have had a portico with a column instead of an interspace in the middle—a disposition which is only worthy of a cockney gable after the order of Queen Anne.

### THE ASSESSOR IN ARCHITECTURAL COMPETITIONS.

THE large number of architects who supported the STREET memorial to the President and Council of the Royal Institute of British Architects, and the still larger number who have since voluntarily entered into an agreement not to take part in any public architectural competition unless one or more assessors are appointed to advise the promoters, is a strong proof of the great importance the profession place upon the necessity of such a course being adopted. When we look down the list of names, and see that it embraces those best known in London and the provinces, we cannot but think and hope that a great reformation may be worked in time. Reform generally works slowly, and the advocates of this method of selecting designs must wait with some patience before the object they seek is accomplished. Most architects, we may assume, agree that the selection of designs by a specialist is better than leaving it to a committee of laymen, who, however desirous of acting fairly, cannot be expected to possess that discrimination and knowledge of architecture, embracing plan, construction, and cost, sufficient to constitute them competent judges. Here and there committees and men may exist who from special training are more capable of weighing the merits and demerits of a plan, but such instances are rare, and any architect in practice knows with what patience and trouble he has to go over his design with a committee or private clients before he can make them understand his drawings, and explain his intentions. If such a difficulty exists with only one design to deal with, the difficulty is multiplied with rival designs to select from. Architects will readily admit this, but will at the same time withhold their adhesion to the agreement their brethren have signed, on the ground that work is scarce, competition in all its forms keen, and that, admitting all the evils of the lottery, they cannot afford to throw away any chance, however remote, and however unfair the terms upon which they are asked to compete. This attitude on the part of so many professional men constitutes a serious barrier to the success of the scheme to which we have alluded. The contest for bare subsistence is carried on so sharply, the number of men in the profession is so large, that no wonder need be felt that many stand aloof, and are quite content to see their brethren who choose to do so, tie their hands, and refuse to compete unless an assessor is appointed. Others again think that this agreement not to compete does not go far enough, and that all manner of stringent regulations ought to be made; others that men ought to agree not to compete on any terms whatever; that the system of competition is altogether a gambling sort of undertaking, a ruin to good architecture, destructive of everything that is respectable and honest in professional practice. Be this as it may, the profession must recognise the fact that it exists in every walk of business life, and that, rail against it as we may, our masters, the public, will it, and architects by the score respond with alacrity to the call. This being the case, it is in our opinion far wiser to recognise the fact, and endeavour by all legitimate and common sense means to regulate the traffic. We have frequently heard it stated that a fair way of selecting designs would be that each competitor should have a vote, and that the competitors themselves should decide to whom the prizes should be awarded. A little consideration would, we

think, soon convince those holding this opinion that such a plan could never work. Let us take a case. A competition is advertised for some hundred miles or so out of London. Would the living-at-a-distance competitors go to the expense of a journey and hotel expenses to view the designs for the purpose of recording their vote? Would it not further be open to the objection of votes being obtained by unfair means? Would not each voter be led to vote for his own design? Would those who were not able to attend, accept with equanimity the result of an election in which they were unable to participate with those who attended it? We think not.

It is well known in the profession that there is a large class of draughtsmen who almost solely subsist upon making designs for competitions. They know what will attract; they have great skill in making a taking design, and their sole chance of success lies in the draughtsmanship of the design. Of the ultimate cost, of good construction and of plan, they are too often shamefully ignorant.

It is not to be wondered at, however, that men unaccustomed to architectural drawings are at once taken by the pictorial effect of this kind of meretricious design. So it often happens that one is chosen, grossly violating the published conditions, utterly impossible to execute for the stipulated outlay, probably ill adapted to the intended site, which very likely has never been inspected, or the surroundings of the new building considered. The design accepted, comes the invitation for tenders with the usual result, tenders largely in excess of the architect's estimate. It is then too late for the committee to reconsider their decision; the design has to be mercilessly cut down and shorn of its prettiness, walls and timber reduced to barely supporting strength, and in the end general dissatisfaction all round, and the work carried on with great friction, and more obloquy heaped upon a profession which the competition system, more than any others, has so lowered in public estimation.

Now it is too much to expect that the appointment of the professional assessor is going to put an end to all and every evil of the competition system. That is a position which the most ardent advocates of it never have assumed, and in their circular issued to the profession, and published in these columns, they especially guard themselves against such a foolish admission. But they say, and we think rightly, that it is on the whole the best—nay, we may add, the only fair course to adopt, both for promoters and for competitors.

If it became a recognised rule that there should be no competition without a professional assessor, one result would be that only works of a certain importance would ever be put to competition, as the cost of employing a professional man of established reputation would be prohibitive with only a small outlay to be expended. We do not hesitate, in the best interests of the profession, to say that it would be an unmixed good, saving much heart-burning, jealousies, and fostering of evils which now cling to the system. Something must be done if the profession is to be one to tempt the best men to enter it, and to maintain the high standard that it ought and might do, to check the reckless gambling which is now in our midst. Terms more and more dishonourable are being offered and scrambled for; works of from a thousand pounds are offered for competition at a ridiculously low offer of remuneration; signs are not wanting that private individuals, seeing that architects will stoop to accept any terms, are also throwing their work to competition, in the hope of getting it done cheaper, and knowing full well that the bait will be snapped up. Men, in their desire to get work—honestly, if they can, but to get work—are ready to accept what may be offered, and the result, if this state of things go on, must be a still lower rate of payment, which at the best only offers now a moderate income even to a man in fair practice. Men are valued according to the estimate they set on their labour, and the estimate in which the public hold many men in the profession is low enough now, and needs no further encouragement.

Now, taking no Utopian view of the value of employing a professional assessor, let us consider some of the advantages. The man who would likely be employed would be one of judicial mind who had devoted years of study to his profession; his eye trained to detect the merits and demerits of a design, and quick to detect, knowing the conditions, whether a plan was workable or not; whether the building before him on paper would be suitable when erected, whether it could be executed within a reasonable margin for the estimate given.



He would at once see whether the construction was as a whole good. A design merely got up for effect would, before a critical eye, stand condemned: mere draughtsmanship would stand no chance. A design in direct violation of the conditions, or with any dishonest attempt to evade them, would be rejected. Is not such a man more likely to arrive at a righteous judgment than a committee, however upright and willing to do justice? We do not suppose that the verdict of such a man will not sometimes be open to question. Human infallibility is impossible; but we do say that such adjudication, or such advice as he alone can give a committee, is far better than the lottery of leaving it to the unaided judgment of the promoters.

Have not the columns of this and other professional journals teemed with complaints of the unfairness, the bribery, the favouritism, and other evils under the old system? The profession has the solution of the matter in their own hands to a much larger extent than at first sight appears. We do not advocate the competition system at all; it exists and must in some form or other be endured, dislike it as we may, but let it exist at least on the best basis possible. The assessor will uphold the honour and dignity of a profession which should be one of the most honourable; he will endeavour to maintain a fair standard of payment for fair skill and work; he will promote good architecture, and encourage honest and zealous men to come to the front; he will discourage paper architects, whose only qualification it is that they can make showy and meretricious drawings.

An objection frequently raised against the employment of an assessor is, that he will be biassed in his judgment; that before a Classic man Gothic would have little chance, or before a Gothic man Classic would go to the wall. All men have their predilections of style, and there is ground for the objections raised on this score; but we venture to think that the case is not sufficiently proven, and that a man sitting as judge, with the eyes of the profession upon him, would endeavour to give a righteous judgment apart from his own individual preferences. No doubt great discrimination should be exercised, and the fittest man chosen for the post that it is possible to obtain. Not only questions of style have to be considered, but questions of special skill in adjudicating upon the class of building proposed to be erected. There need, we think, be no very great difficulty about this. Accept the principle that a specialist should be appointed, and the best man for the building to be erected can easily be found, whose class of practice would enable him to speak with authority. That the appointment should be made as an initial step is, we think, most desirable, so that, knowing the wants of the promoters, he may frame the conditions and consult with those who call in his advice. We observe that in the circular to be sent by the Competitions Memorial Committee to promoters, they do not undertake to advise them on the selection of an assessor or assessors, but wisely refer them to the President and Council of the Royal Institute of British Architects, or to any well-known man not necessarily a member of that body. It should not, therefore, we think, be difficult for promoters to gain the services of a competent man for the particular work contemplated. If the profession at large, in their best interests, support the scheme, which has gained the adherence of some of the best men in their ranks, reform will be possible and much good spring from it.

## STUDIOS IN ROME: SIGNOR G. COSTA'S.

[BY A CORRESPONDENT.]

**S**IGNOR COSTA'S name is not unfamiliar to English art-lovers. His works have been shown from time to time at Burlington House, and he has been a contributor to the exhibitions of the Grosvenor Gallery since its opening; also in 1882 there was a special exhibition of his works in London. He is one of the few Italian painters who have broken free from the influence of national modes and forms, and has asserted his personality in new and self-appointed ways, with an individuality of character and a sincerity of purpose which in themselves command respect. There is, however, something more in his work than originality of conception and independence of treatment merely as such. It is thoughtful, earnest, and conscientious; and if not distinguished by that brilliancy of execution which in the first instance strikes the

eye by its splendour, it does not the less affect the mind dwelling upon it by its sober reticence, its well-digested faithfulness of reproduction, and a certain imaginative glow which satisfies the interior sense with the feeling of what is essentially tender and beautiful.

Italian art is at present in a somewhat anomalous position. It has lost the old traditions without introducing anything stable and satisfactory in the place of them. One cannot imagine a greater contrast in the selection of subjects and the mode of dealing with them than is shown in the works of former days and those furnished to us now. The fine, puristic sentiment of the Umbrians, the glory and richness of the Venetians, the intellectual power and academic perfection of the Roman and Florentine schools, have all vanished as art influences, leaving no trace or tradition behind. Another sentiment now rules everywhere, partly the outgrowth of Spanish examples inaugurated by FORTUNI, partly resulting from the desire to attract the eye by vivid colours and strong contrasts united with great cleverness of technical manipulation, but almost entirely wanting in those higher qualities of mind and of soul which are necessary to create and retain an interest in all artistic work calculated to take its place in the æsthetic culture of the time. In modern Italian pictures one too often finds forced and exaggerated sentiment, if the subject be a dramatic one, generally involving some circumstance of blood, intrigue, or horror; or a motive so trivial and silly as to be unworthy of notice. Should the subject be landscape one gets an extravagance of treatment which borders upon the meretricious. There is little that is sweet, wholesome, and unaffected. Amongst this little, however, must be placed the works of Signor COSTA. Whether in the figure, with which he sometimes deals, or in landscape, where his chief forte lies, he has taken the simplicities of nature, and by a fine, artistic perception has impressed upon them his individuality without obliterating or losing sight of their intrinsic qualities. The friend of our English MASON, in earlier times, he has never lost sight of his influence. To Sir FREDERICK LEIGHTON, too, we must accredit him indebted for a certain breadth of view and largeness of style—qualities which characterise the work of the President of the Royal Academy. Doubtless these painters also received a reactionary influence from their Italian professional brother, who is no mere copyist or slavish follower of the modes of others. From these observations it will be seen that Signor COSTA appeals to a northern rather than to a southern public, and to them he must look for a fair appreciation of his studies and labours.

Of Signor COSTA'S more recent works we have two painted for Mr. G. HOWARD. In the one is represented the Ponte Nomentano, a bridge which crosses the Anio two miles from Rome, seen under the effect of a sunset sky. A sober stretch of the Campagna is streaked by the waters of the overflowing river. The landscape is marked by a tree and two figures. In the distance the Tusculan Hills are seen. The other, the Bocca d'Arno, represents a reach of the Arno near its mouth below Pisa, flanked by some fishermen's huts. On the spreading shore two figures recline. Above the further bank the moon rises beyond the distant mountains. The effect is broad, serious, and impressive. Another is a landscape taken at Asciano. It is composed of the spur of a hill, at the foot of which are some sheep feeding. A small chapel occupies a part of the foreground, from which an expansive, rural, middle distance leads the eye to the far-off blue mountains which limit the horizon. This is painted with Signor COSTA'S usual care and thoughtfulness; but the subject is a little wanting in interest, which induces a tendency to monotony in the general effect. We have next two little pictures representing respectively Monte Oreste and Monte Circeo. The first of these, the well-known Mount Soracte of the ancients, is taken from the Villa Borghese. Above the trees, stripped of their summer foliage, the classic peaks of the mountain rise in distant blueness. The values of this picture are carefully rendered under a somewhat cold light. The other represents the Circæan Promontory, the appearance of which is familiar to travellers along the Mediterranean coast of Central Italy. The huge headland rises in faint grey from a well-studied and carefully-painted stretch of sea. It appears like an island from a little distance, the low-lying connection with the mainland not being visible. Thus it is rendered by Signor COSTA, a line of fishing-boats with lateen sails passing under the promontory. Signor COSTA'S largest picture of this year is *Spring on the Celian Hill*. The foreground is occupied by orchard gardens, in which are some



almond-trees in blossom. The sculptured figures which surmount the façade of St. John Lateran stand in the middle distance. Farthest of all are seen the Sabine Hills. This picture is painted in a series of well-balanced greys varying from neutral to more positive tints. In spite of the refinement and delicacy displayed in the manipulation, one feels that it might have borne a somewhat richer and fuller treatment. In his *Evening Repose* a peasant woman is seated on a wall, a mattock and sickle lying on the ground. The figure occupies a large proportion of the picture. A flush of dying light fills the sky. The landscape is serious, simple, and broad, and reminds one, in its well-balanced sweetness, of the French MILLET. Porto d'Anzio, the site of the ancient seaport Antium, is favourite art-ground of Signor COSTA. His fine picture of a dreary coast scene in this district has been exhibited in England. Amongst other studies and pictures from the same region we have the mansion of the BORGHESE family on its wooded height overlooking the sea, a glimpse of which is seen in the distance. Another, also taken in the same locality, gives us the old town Nettuno, with its forlorn and very picturesque-looking castle on the sea-border. Rising out of the dreary waters are seen the ruins of the old military port of NERO. The Pontine Marshes bound the sea on its farthest side, beyond which rises the Volscian range. Certainly Signor COSTA conveys the gloom and eerie desolation of this spot as no one else has done. One almost feels the pervading melancholy with which its very winds seem to be charged, as of a funereal spirit mourning its departed greatness. Scarcely less sombre are the passages of landscape taken from Gombo, near the mouth of the Arno, of which we have several. One of these is peculiarly refined and harmonious. Groups of pines, near and more distant, rise from a shadow-streaked sward here and there bristled with rushes. Over these a soft golden light is diffused, which one might imagine to be engaged in loving play with the tender shadows, so sweetly are they blended and interwoven. A woman ties up a bundle of sticks in the foreground. In this picture the painter has realised his happiest mood, and well expressed his feeling for one of those subtle and enchanting effects of nature, the contemplation of which acts upon the mind like a sedative. On a broad and low canvas we have a representation of some Tuscan vineyards underneath Vallombrosa, in the season of autumn. In the extreme distance the Carrara mountains lift themselves above the horizon, all sobered under the gathering twilight. Although not finished, this promises well.

Signor COSTA has not wholly confined himself in his choice of subjects to Italian soil. He has given us some remarkable interpretations of English landscape and scenery. They have much of the freshness and open-air look of DAVID COX's landscape studies, reminding one also, to a certain extent, of some of CONSTABLE's crisp and sparkling transcripts; and, though they cannot lay claim to the full vigour and frankness of these masters of the brush, yet they compensate in a measure for their brusque qualities by careful study and thorough artistic finish—a study and finish which never become oppressive or distracting. Amongst these is a landscape in Cumberland, a fresh green English pastoral, with a harmonious sweep of line characteristic of the district. Some beeches in the foreground throw their shadows on the sward. A wooded upland is seen in the distance. The picture is agreeable and pleasing. Another, of a somewhat similar subject, gives us a pasture flanked by a bit of woodland. A broken middle distance leads the eye to a stretch of blue heath. A mottled sky suggests the smiles and storms of changeable weather. Discarding all meretricious attempts to attract the eye, this picture is distinguished by a repose of treatment which it is refreshing to look upon. Another characteristic piece of English landscape on the borders of the Lake district, represents a heath-patched dingle with a beck running through it. A distant hill lifts its shoulder over the boundaries of this little nook, over which hangs a threatening sky.

But it is not only as a landscape painter that Signor COSTA shines. He has painted some heads and figures of rare excellence, first of which may be mentioned a quarter-length portrait of his own daughter. It is designed and painted from a thoroughly artistic point of view. She is clothed in a blue-grey velvet dress, with a lace frontlet—a sweet girlish face which fixes itself on the memory. She looks out of the picture with an earnest childlike gaze, the hair streaming on each side of the face. The tender manipulation, the fine

neutrality of colour and equality of tone in this picture give it a high place in this branch of art. Another portrait is that of a nephew, hardly less excellent, but in a different key and sentiment. He is seated with some flowers hanging from his hand. It is as sweet and unaffected as if it had been painted by JOHN BELLINI, and would, indeed, hold its own beside the works of that master. Other figure pictures represent a girl of Lerici, seated with her back to the spectator, looking over her shoulder, and a careful and refined study of a girl descending some steps with a well-poised pail on her head. She stands firm and strong as a caryatid, a fine example of the higher type of Italian physique.

On the whole, we leave the studio of Signor COSTA impressed by the work of a refined and artistic mind, poetic in the truth and simplicities of nature, and indicating an eminent position for the art of his country, if it could only be looked upon as an influence having a bearing on the aims and works of his compatriots.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE twelfth and last ordinary meeting of the session was held on Monday evening, Mr. Ewan Christian, president, in the chair. A vote of thanks was passed to the various gentlemen whose donations of books to the library were announced.

Mr. MACVICAR ANDERSON stated that the Architectural Conference to be held at the Health Exhibition had been postponed from June 23 to July 10, 11, and 12.

A ballot then took place, and the following gentlemen were elected:—

*Fellows.*—Messrs. Arthur Ebdon Johnson (Melbourne), Philip M. Dudgeon (Natal, South Africa), Thomas Rowe (Sydney), President of the Institute of Architects of New South Wales), Thomas Searancke Archer, Thomas Lennox Watson, and Frederick Wheeler.

*Associates.*—Messrs. Alexander Brown Wilson (Brisbane), Charles Mason, James Anderson Williamson, John Bevan Phillips, Joseph Addenbrooke Saunders, John Moir Kennard, Hedley John Price, Frederick Jones Banister, Lionel Thomas Waller, Andrew Whitford Anderson, Robert John Beale, Alexander McGibbon, Richard Malone Hamilton (New Zealand), Arthur Crow, Thomas Frederick Pennington, William Henry Radford, Assoc. M. Inst. C.E., and Samuel Hurst Seager (New Zealand).

*Honorary Associate.*—Mr. Charles Bell Birch, A.R.A. Monsieur Alfred Nicolas Normand, Paris, was elected Hon. Corr. Member by acclamation.

The following gentlemen, it was announced, had ceased to be members of the Institute:—Messrs. D. J. Coakley, of Cork, W. H. Hoskins, G. S. Rees, Rollitt Stockton, and Sydney Turner.

### The Royal Gold Medal.

The PRESIDENT: Gentlemen,—You are of course aware that at this, the concluding evening meeting of the session, it is usual to present the Royal gold medal to the person selected for that honour, approved by yourselves and by Her Majesty the Queen, in whose name it is given. You are also aware that this year the choice has fallen on Mr. Butterfield, but many of you may possibly not know, and it is therefore right I should explain, that while thankfully accepting the proffered honour, Mr. Butterfield said that it would be so inconsistent with the habits of his whole life to appear in person publicly to receive it, that, if it were a necessity, he must regretfully decline. Considering that personal appearance had in other cases been dispensed with, the Council were of opinion that this difficulty need not bar their decision as to the man. I thought it my duty, however, to represent to him how much we should like to have welcomed him here, though I confess to having much sympathy with his feelings in the matter. I know no man whose whole career has been more truly honourable, or anyone whose work as an architect has been more thoroughly consistent with the quiet dignity so characteristic of his life. In the great movement for the revival of Gothic architecture there have been, amongst others less pronounced, at least two types of men who have achieved eminence as practising architects. The prominent leaders of the cause were of great mental and physical power, indomitable energy, and restless love of work, and could not fail to attract general and popular attention; but not less important to the success of such a movement have been the quiet, studious hard workers, who in parallel lines have done so much to advance the knowledge and sound practice of their art. Of the former type two have accepted this medal, and, to our sorrow, have successively passed away to their rest. Of the latter, one has received it and is with us; but the roll of gold medallists would indeed have been incomplete had it lacked the name of William Butterfield. In him we must all recognise a true master of his craft; one who not only knows well the art he practises, but whose works from first to last, whether great or small, in the country or in



the cities, bear the uniform impress not only of skilful design but of the loving care with which they have been carried out. I hope I may count upon your sympathy in saying what I often think, that the world at large shows too little gratitude to those who minister to its improvement or its pleasure. Just as I think the poet, the great writer, the musician, the painter, should be thanked for the gratification and instruction which each in his own vocation affords, so no less should the great architect; yet who ever thinks of giving him his proper meed of praise? Who ever thanked Sir Christopher Wren for his noble works in the city of London, the churches, towers, and spires with which he beautified it, or the magnificent cathedral, with its glorious dome, its crowning glory? We know too well how the great architect's last days were embittered by the persecutions of men in office not worthy to tie the shoe-strings of the master; yet what a poor, mean place would London have been but for the working of his fine and cultivated genius. Many times have I wished that I might have met in Palace Yard and thanked Sir Charles Barry for his noble clock tower, and of many another work I could probably say the same. Truly, I think, if any man earns the gratitude of nations it is the great architect, whose works are for all time an honour to his country; visible to anyone who takes the trouble to see, or has the mind to appreciate the beautiful in art; and for this reason I think we have done well in offering to Mr. Butterfield the greatest honour it is in the power of the Institute to bestow. If it be true, as I hold with the poet it is, that "a thing of beauty is a joy for ever; its loveliness increases, it will never pass into nothingness," then I think we may joyfully thank Mr. Butterfield for the dignified work of his early years; the graceful and beautiful spire, and the vigorous, yet sumptuous, interior of his noble church of All Saints, Margaret Street; and lest I should weary you by a bare recital of his works, passing over many others, each possessed of the power and beautiful form of which he is so great a master; glancing only at the noble church of St. Alban, of the fine, west front of which, as has been well remarked, there was lately an unlooked for revelation; and the fine church of St. Augustine, South Kensington, I will stop at the great crowning work of his maturer years, the magnificent and richly-finished chapel of Keble College, Oxford. In each and every one of these is seen, though with great variety of composition, the same noble conception of dignified form, the same careful study of every detail for producing general harmony of work, and, while fully availing himself of the richness derivable from the subsidiary arts in choice stained glass, mural painting, or mosaics, the same powerful mastery which fuses the whole and subordinates everything to the architect's design. While possessing, as he does, a profound knowledge of the works of the great architects of old, and availing himself of the numberless resources which they so copiously afford, Mr. Butterfield's genius has enabled him to work in a style peculiarly his own, never slavishly copying, but moulding in his own mind whatever he desired to employ in carrying out his work; and though opinions may and will differ on matters of taste, none can certainly deny that his works are those of a refined and cultivated gentleman and a most able, original, and accomplished architect. Finally, gentlemen, I think I have said enough to show that our medal has been worthily bestowed, and I trust I have not wearied you in dilating possibly too long on what has been to myself a very genial theme.

The President then presented the Royal gold medal, this year given to Mr. William Butterfield, to Mr. Penrose, who attended on the part of Mr. Butterfield.

Mr. PENROSE said that, under the circumstances, he had no occasion to say much. He considered a great honour had been conferred on him in making him the medium to convey the gift of the gold medal to Mr. Butterfield, and he should endeavour as soon as possible to acquaint Mr. Butterfield with the President's remarks and the enthusiasm with which those remarks had been received.

#### Medals and Prizes.

The President then distributed the medals and prizes as follows:—

The Soane Medallion, with fifty pounds, was awarded to Mr. John Oliver Harris; and in the same competition a Medal of Merit was awarded to Mr. Herbert Osborn Creswell.

The Tite Prize of thirty pounds was awarded to Mr. Edwin William Poley, Associate; and a Medal of Merit and ten guineas were awarded to Mr. John Archibald Campbell.

The Institute Silver Medal and ten guineas for measured drawings was awarded to Mr. Andrew Whitford Anderson, Associate.

A similar Institute Silver Medal for measured drawings was awarded to Mr. Arthur Needham Wilson, a Medal of Merit to Mr. John Robert Sutton, and Certificates of Honour to Mr. Arnold Bidlake Mitchell and Mr. Henry Downs.

The Institute Silver Medal and ten guineas (Essay Prize) were awarded to Mr. Thomas Purves Marwick, Associate (the first Ashpitel prizeman in the obligatory examination).

Mr. J. T. WOOD, F.S.A., then read a paper on the

#### Temple of Diana at Ephesus.

Mr. WOOD began his paper with a general statement of the question between Mr. Fergusson's restoration of the Temple of

Diana at Ephesus and his own. So material was the difference between them that he had felt bound to submit to the judgment of the Institute both plans drawn to the same scale, but in no spirit of antagonism. When in 1863 he set himself to unearth this glorious building, which was reckoned one of the Seven Wonders of the World, he had not forgotten to study beforehand the few ancient authorities on the subject, especially Pliny, in whom, considering that the Roman writer never saw it, Mr. Fergusson, strangely enough, so implicitly confided. Clearly we must reject any of the dimensions given by Pliny which were found irreconcilable with the data acquired by excavations. By this rule Pliny's figures for the width of the temple platform were condemned as inexact. The true width was 239 feet 4½ inches. But Pliny's 425 Greek feet for the length was borne out by the excavations. Mr. Wood thus got, he said, ample space for one or more altars, as well as for marshalling such processions as that described in an inscription found in the Great Theatre. Mr. Fergusson suggested an arrangement of the steps in broad and narrow flights, which Mr. Wood argued, was inadmissible. It was further shown how in the investigation of these and other details, he was brought into contact with the *débris* of every one of the three successive temples which had occupied the site. The earliest of the three was that begun towards the middle of the sixth century before the Christian era, under the architects Chersiphron and his son Metagenes, and to which the Lydian King Croesus so liberally contributed. This temple appeared to have been adorned with sculptured columns, as fragments of archaic bas-reliefs attached to a rounded surface were found on the site, and were now to be seen in the Archaic Room at the British Museum. A large lion's head, and some other fragments of antique sculpture, found in some foundation piers of a later age, must have come from the earliest of these three temples. The second temple was begun in the early years of the fourth century by the architect Paionios. The last temple was begun in the time of Alexander the Great, and must have been already far advanced when he came to Ephesus, since he proposed that he should be allowed to dedicate it to the goddess in his own name. Mr. Wood said he had ventured to place two altars on the platform at the western end, one for animal sacrifices, and the other for such offerings as the fruits of the earth. In his account of the *cultus* of the moon-goddess, to whom, as well as to her brother, the sun-god, human victims were anciently sacrificed, Mr. Wood was largely indebted to the erudition of Professor Paley, who thought that the great statue must have been hypæthral, because it was an object to let the moon shine straight upon it, and that it would stand close to, and as it were, preside over the principal altar. Mr. Wood mentioned a suggestion of his own in conversation with Mr. Fergusson as to the hypæthron, that these openings in the roofs of temples harmonised well with the ancient Greek belief that the gods floated in the air, and would at times descend thereby into their temples. Mr. Fergusson's reply was, "Let them walk in at the door like other people." Mr. Wood next pointed out the monumental verifications of his views as to the width of the temple itself and to the position he had assigned to the columns. He explained why he had not felt at liberty to make such a restoration of the temple as would better satisfy the desires of those who, with good reason, imagined that groups of sculptures, bas-reliefs and statues, in addition to the sculptured columns or frieze, were needed to account for the lavish admiration bestowed upon this world's marvel by the ancient writers. He stood in awe of the peril of dwarfing the grandeur of the building. He had, however, ventured to put statues on pedestals against the cella walls. One of the most important points of difference between Mr. Fergusson and himself was in respect of the number of external columns. He accordingly vindicated his own punctuation and rendering of the Plinian text—"One hundred columns, twenty-seven the gifts of kings." This, he contended, was more correct than the removal of the comma, and making Pliny say there were "One hundred and twenty-seven columns the gifts of kings," as Mr. Fergusson did. Room had been found for 100 columns, but not for more, and if there had been 127 they could not all have been given by kings. Rich private individuals and communities would give some, and he himself happened to find part of the base of a column, showing that it had been given by a Sardian lady. The most interesting feature of the temple must have been the sculptured columns, 36 in number. To an account of these, of the temple volutes and architraves, as also of its cymatium and marble roofs, the remainder of the paper was devoted.

Mr. JAMES FERGUSSON, who was unable personally to attend, sent the following reply to Mr. Wood's paper, which was read to the meeting:—"In the first place I object *in toto* to his arbitrary insertion of a comma, where none exists, into a singularly plain sentence of Pliny's works, which alters its sense entirely, and so far as I can see, makes it read very like nonsense. As it stands in the text it simply says: 'There are 127 columns' (in the peristyle of the temple) 'the gift of several kings.' Alexander offered to give the whole if allowed to dedicate the temple to the goddess in his own name. His offer was rejected, but other donors, not necessarily kings, as we understand the term, supplied his place, each giving according to his ability. Of course, when a



sentence seems perfectly inexplicable, or at variance with facts ascertained in excavations, the insertion of commas, and stops, or even alterations of the text, are allowable, but only as temporary suggestions to get over what appear to be insuperable difficulties. When, however, it dawned upon me that thrice nine made twenty-seven, and when on protracting them I found that nine pillars, with the usual intercolumniations of 19 feet 4 inches made up the same dimension that was occupied by the widely-spaced eight columns of the front, the riddle was guessed and the problem solved. When worked out, as shown in the plan published in your Transactions, it was found that not only did every dimension quoted by Pliny come out exactly correct, but every paragraph bearing on the subject in Pliny, Pausanias, Strabo, or any author in ancient times was verified and confirmed. The only wonder to me is that Mr. Wood did not at once adopt this suggestion, which got him not only out of his translation difficulties, but rendered the temple he had discovered with such infinite labour so much more worthy of the character for magnificence which it bore throughout the ancient world. Instead of this, he adheres to a plan in which only one dimension comes out correct, and that not ascertained by excavations, but adopted from Pliny. In the only plan he has yet published, it is quoted as 418 feet  $1\frac{1}{2}$  inches, as ascertained by excavation; he now adopts 425 Greek feet (430 English), which is the dimension for the length given by Pliny. It is strange that while Mr. Wood will not allow that this author could count the columns, which were then all standing, and their number a matter of notoriety known to all the world, he should admit that he could measure the length of the temple, a very much more difficult operation, to within one foot, though he failed, according to Mr. Wood, to ascertain the breadth, 220 Greek feet, which, being about half the other, was certainly an easier operation. Not only did the adoption of 127 columns get over all the difficulties regarding the dimensions quoted by Pliny, but the very much more serious one that all antiquity declared the temple at Ephesus to be the largest as well as the richest in all Asia. Pausanias, for instance, says (book vii., chap. v.) that it is larger than that at Didyme, whose dimensions are perfectly well known. It had 120 columns 64 feet in height, while Mr. Wood represents that at Ephesus as possessing only 100 columns, and their height at only 55 feet 8 inches—a fact which, it seems to me, is quite sufficient in itself to settle the question. One of the arguments on which Mr. Wood insists is that he found a six-foot length of the lowest step of the podium in such a position that there is no room for my 127 columns. There may be fifty ways of accounting for such a trifling fact, but that I have suggested in my paper is quite sufficient. Strabo's account of the addition made to the temple after it was finished by Chersiphron not only suggests, but seems to require, such a buried step. But I do not see that Mr. Wood has turned his attention to this, or attempted to explain the passage otherwise. In fact, the Institute have now before them two plans of this famous temple, one of which professes to explain every dimension handed down from antiquity, and to reconcile them with every discovery Mr. Wood made on the site, and to offer a reasonable explanation of every fact mentioned by any ancient author; the other does not pretend to agree with any passage in any writer of antiquity, except by a forced and most dubious mode of interpretation, nor to agree with any one dimension given, except one which was not ascertained by excavation; while from the smallness of its dimensions it contradicts all history. I cannot quite make out whether Mr. Wood still adheres to his theory that the heavy blocks carved on two faces are parts of the frieze of the temple, or are square pedestals of certain of the pillars, as I suppose; but as the blocks are now arranged in the Ephesian Gallery of the British Museum any architect can judge for himself, and I shall be excessively surprised if anyone agrees with him. In the meanwhile it would assist materially in settling the question if he would let us know where they were found. As there are certainly four, probably five, of them, they must, if parts of the frieze, have been found near the four angles of the temple. As far as I can make out from his published work, this was not the case. When he puts into tangible form his ideas of the hypæthron, it will be time enough to consider them. Till he does I can only say—with all due deference to the learning of Professor Paley—that those expressed in this paper appear to me only as examples of a hazy mysticism which I am astonished that any practical architect should adopt."

Some remarks were then made by Mr. Penrose and Mr. Popplewell Pullan, and shortly after the proceedings terminated.

### EARLY SYMBOLISM.

A PAPER, entitled "Notes on Early Christian Symbolism," was read at the concluding meeting of the Society of Antiquaries of Scotland on Monday by Mr. J. Romilly Allen. After indicating the extent and variety of the general subject, the author proceeded to deal with that special branch of it which includes the representations sculptured on the fonts, tympana of doorways, and other carved stonework of the Norman period in Great Britain. He had chosen this particular class of remains partly because it

followed directly in order of time upon the early sculptured stones of Scotland, and thus threw light on the meaning of the earlier system of symbolism, and partly because these sculptures of the Norman period had a story of their own to tell which was fraught with the very highest interest, if we could read it aright. After adverting to the changes in culture which continued to produce alterations in the expression of the symbolism, he proceeded to show that this change, though persistent, was only partial in its effect, for, although some symbols have been lost entirely, there were others which still remained the same as they were in the third century A.D. They had thus four classes of Christian symbols—(1) Those which had survived the effects of time, and were still used to express their original meaning; (2) Those which had ceased to be used both in this country and elsewhere, but whose significance was known historically or by inscriptions upon the objects themselves; (3) Those which, though they had disappeared in this country, were still in use elsewhere; and (4) Those which had ceased to be used in this country and everywhere else, and of whose significance nothing was known, either from history or from inscriptions. Having enumerated the chief sources of the materials for the study of early Christian art from the third to the thirteenth centuries which have been fully explored, he referred to the almost inexhaustible stores of sacred and legendary art in the MSS. in the British Museum, which were still untouched, while the sculptures found in connection with our ancient cathedrals and churches had never been dealt with systematically. As showing what ample material there was to form a museum of Christian archæology, by having casts taken of these sculptured fonts, tympana, &c., so that they might be placed together in one gallery, as thus alone could they be made to yield whatever scientific results were attainable from them, he gave a list, classified by subjects and localities, of upwards of 120 tympana, eighty fonts, and thirty pieces of miscellaneous sculpture. As far as actual execution was concerned many of these early Christian works of art were rude in comparison with the best examples of Classic art, but in almost all cases the ideas which inspired the Christian sculptor were purer and nobler than those of Pagan times, and they were expressed with a vigour which was often wanting in more refined productions of a higher artistic culture. The sculptured Celtic slabs and crosses of Great Britain were the next oldest source of early Christian art to the catacombs of Rome, and by a systematic comparison of their symbolism with that which preceded and followed it, he was not without hope that some of the problems which had so long baffled the research of archæologists might thus be elucidated. The paper was illustrated by a series of drawings and photographs of the principal types of the symbolic representations on Norman fonts and tympana.

### ARSENICAL PIGMENTS IN MURAL DECORATION.\*

THE subject of the contamination of mural decoration with poisonous pigments is by no means a new one. It is known that wall-papers, wall-washes, and distempers may be so impregnated with arsenic as to cause not only serious illness, but even death; and that curtains, carpets, and dress fabrics have in a similar way proved subtle danger to health. Dr. Kirchgässer, of Coblenz, in 1867, investigated cases of poisoning by green wall pigments, and published twenty-one cases, describing their effects. The well-known publications of Mr. Henry Carr, C.E., containing a complete summary of the subject, have drawn attention to the evil in our own country. The Medical Society of London issued a circular containing a number of queries to medical men, and, through Mr. Malcolm Morris, secretary to the committee, issued a report (February 1880) based upon 244 replies, embodying information with illustrative cases. A committee of the Society of Arts have strenuously endeavoured to obtain legislation to prohibit the sale and use of arsenical colours, but their efforts have so far failed. In June 1883 a "Report on Evidence regarding the Injurious Effects on Health arising from Arsenical Wall-papers and other articles" was issued by Dr. Lauder Brunton, on behalf of the National Health Society, containing instructions for the application of standard tests. This society is now trying to draft a Bill for Parliament, directed against the indiscriminate sale of poisonous pigments.

The Scheele's, emerald, or Schweinfürth green consists of copper acetate and arsenite, and contains as much as 59 per cent. of arsenic if unglazed papers composed of it be scraped; but it is now well ascertained that colour is no guide whatever to freedom from arsenic. As examples in my possession show, almost any tint may be more or less impregnated—viz., reds, browns, French greys, neutral blues, greens, and even French white. Arsenious acid is also largely employed in the manufacture of aniline colours—e.g., magenta, rosaniline, fuschine—and though it only should be

\* From a lecture delivered to the Leeds Architectural Association, by Mr. Charles J. Wright, M.R.C.S. Eng., Senior Surgeon to the Leeds Public Dispensary, &c.



used for "fixing" the colour, it is not always got rid of in the finished goods. In manufactories where arsenical colours are used at all, probably all papers will get to some extent contaminated. Manufacturers are now fully alive to the danger of using these colours, and some firms have for long been in the habit of guaranteeing their papers as free from arsenic. I am indebted to Messrs. Cooke & Co., of Leeds, and to Messrs. Woollams & Co., of London, for the beautiful specimens exhibited in order to show how good colours of every variety, and of good body, permanency, and brilliancy, may be produced, at least in all the better class papers, without the aid of any arsenical pigment whatever.

The size with which the colours are mixed before printing used to be impregnated with arsenic, which was added on account of its antiseptic properties. The fact of size being now supplied free from fatty matters renders this addition unnecessary. The paste too with which the paper is laid on may have contained arsenic (as a preservative); hence the double necessity of being careful to strip off all old papers from a wall before putting up a new one.

It has been suggested that, in order to provide against accidental and unavoidable contamination, there should be in any legal prohibition an allowance of half a grain of arsenic per "piece of paper," a piece being 12 yards long by 21 inches wide. This quantity, it is thought, would not be injurious to health. It is found that a suitable size for testing is 16 square inches—viz., 4 inches by 4 inches. The above allowance of half a grain per piece gives '001 grain per sample of 16 square inches—a quantity more than four times the amount which would be permitted by the decree which exists in Sweden. The proportion of arsenic in paperhangings has often been found to range as high as 40 to 50 grains in the square foot of the paper, frequently reaching 10 grains to the square foot. A large-sized room has about 1,000 square feet of wall surface after allowing for windows, doors, fireplace, &c., so that the amount of poisonous pigment exposed to chemical action may be enormous.

There seems to be no reason why good colours should not be produced without the use of arsenic, and no appreciable difference in the cost of production of non-arsenical colours, at least in the better-class papers, exists. It appears, therefore, that the evil effects due to poisonous mural decoration only require to be more widely known in order that the manufacture of non-arsenical papers may become universal. These effects have now been observed in a large number of cases, and have been tabulated by Mr. Malcolm Morris according to the parts affected, and according to frequency of occurrence as follows:—

1. *The Stomach and Bowels.*—Diarrhœa and dysentery, nausea and vomiting, loss of appetite, thirst.
2. *The Eyes.*—Conjunctivitis and sore lids.
3. *The Nervous System.*—Depression of spirits, restlessness, sleeplessness, headache.
4. *The Throat, Nose, and Respiratory Organs.*—Soreness of throat, ulceration and dryness, bronchial catarrh, asthma, symptoms like ordinary cold in the head, with running of tears.

The following cases are illustrative of some of the above symptoms:—

*Case I.*—A gentleman entered a new house and slept in a bedroom formerly used only occasionally as a spare room. He suffered from headache, sleeplessness or unrefreshed sleep, sore throat, depression of spirits and malaise. On stripping the wall several layers of paper were found, that on the surface being loaded with arsenic (specimen shown). The walls were entirely cleared, and the above symptoms disappeared.

*Case II.*—A boy suffered from persistent mucous diarrhœa; afterwards the same boy and his father from ulceration of the mouth, which was very intractable. The nursery paper (piece shown) was found to be highly arsenical. This was removed, and all trouble subsided. Obstinate skin affections, troublesome eruptions and continued boils have also been traced to the same causes. The effects of arsenical colours upon the eyes were long ago pointed out by Mr. Jabez Hogg and others, and are still not unfrequently observed (specimen shown). Cases have occurred also where even fatal consequences have resulted. Out of 102 cases of arsenical paper poisoning collected by the committee of the Medical Society of London, six were fatal. The following case occurred in my practice since the above were tabulated:—A man, æt. forty-six, suffered from jaundice, sickness, pain in the abdomen, obstinate cough, a scaly condition of the skin, with much itching. He was intensely anæmic, lost strength, and died after several months of increasing weakness. The sitting-room of his house was washed over annually with a green powder (sample shown), which was kindly analysed for me by Mr. R. Reynolds. He reported it to consist of "chalk highly coloured with arsenite of copper," the "amount of poisonous material being simply enormous." This was only discovered a short time before his death, which was attributed to the poison in the absence of other cause also by Dr. Clifford Allbutt, F.R.S., who saw the case with me. Distinct traces of arsenic were found in the excretions by Professor Thorpe, F.R.S., who kindly analysed them for me.

The form and mode in which arsenic from pigments attacks the system may not always be the same. It is well known that arsenious acid vaporises at a comparatively low temperature, and that all poisons have a fearfully increased potency in the gaseous

shape. A few hundredths of a grain of arsenioretted hydrogen have proved fatal, for instance. Now, hydrogen is evolved during the growth of mould (Roscoe and Schorlemmer), and it is probable that the joint action of moisture and of organic matters—viz., of substances used in fixing to walls papers impregnated with arsenic—will result in the development of arsenioretted hydrogen (Fleck, of Dresden), especially if favoured by the heat produced by gas, intensified by want of proper ventilation. The dust collected from the tops of furniture contained in rooms papered with arsenical colour may, on analysis, yield much arsenic; but it is impossible that all the effects can be produced by simple mechanical detachment.

It does not follow, of course, that all who are exposed to the poisonous influence are necessarily affected. Sewer gas may similarly strike down only certain individuals unaccustomed to it. Infection may attack one child, another may escape. Like the ash-pit clearers and the opium eaters, many may acquire a similar tolerance of arsenic. I lived and worked for seven years in a consulting room covered with a paper which I afterwards found gave "ample evidence of the presence of arsenic," but, as Mr. Reynolds told me, it was "a paper of good quality, and the colour firmly fixed." Although I suffered from an illness, and sundry minor troubles during that period, to which the poison might, to some extent, have contributed, I could, I think, assign to them other more decided causes.

When we come to ask what are the legal restrictions upon the sale of arsenic in this country, we find that the Sale of Poisons Act, although guarding and limiting the sale of pure arsenic to a great extent, does not prohibit in any way the indiscriminate importation and distribution of arsenical and other poisonous pigments. The highly poisonous green wall-wash, which in my case proved fatal, I found any poor person unknown to the vendor—a highly-respectable druggist—might purchase in any quantity he or she desired without the slightest limitation.

The law protects the public from the adulteration of milk with water, though—as recent epidemics have shown—our sanitary authorities do not possess the power to prevent its adulteration with a concentrated solution of scarlatina or typhoid fever. We are still too liable—without due precaution—to be poisoned by our decorative surroundings. It is much to be regretted that we still differ from so many of our continental neighbours in that no enactment yet exists upon our Statute-book bearing upon the danger referred to. The National Health Society have taken the matter in hand. In response to a request through their chairman, Mr. Ernest Hart, a circular was last year addressed by Lord Granville to each of Her Majesty's representatives at foreign courts, requesting "information respecting the legislative or municipal enactments having for their object limitations, restrictions, or safeguards in the manufacture, use, or sale of arsenical and other poisonous colours in the tinting of wall-papers, and various textile fabrics for industrial and decorative purposes." The replies have recently been issued as a Parliamentary paper. The "correspondence" is full of interest, and shows that of the twenty-two States which have diplomatic relations with the Court of St. James's, only eight are in the position of England in this matter.

France, Belgium, Spain, Portugal, Greece, Italy, Switzerland, and the United States impose no restrictions; while in other countries—notably in Germany, Russia, and Sweden—the regulations are most stringent. In Germany, from whence most of the colours used in this country are imported, an Imperial order forbids the employment of colours prepared with arsenic in the manufacture of paperhangings. Any person who contravenes this order, or who attempts to do so, is punishable with imprisonment, and with penal servitude if "severe bodily damage or death results." Restrictive regulations having been found to operate disadvantageously on Prussian trade with foreign countries, an order was issued in 1854 permitting manufacturers to use arsenical colours for exportation only, provided all such colours were kept carefully separate from those for home use. "This order has, however," we are told, "been made but little use of"—happily so for us. In Russia home manufacture and importations of poisonous colours are prohibited, and detailed instructions for testing them are given.

Sweden possesses a most complete Royal decree, founded on elaborate reports of the Swedish Board of Medicine, the prohibitions applying specially to the importation of carpets impregnated with dangerous colours. Let us hope, then, that ere long the efforts of the National Health Society may succeed in obtaining some enactment whereby it will be rendered a punishable offence—I. For the paper-stainer to use pigments impregnated with arsenic in the manufacture of his goods; 2. For the retail dealer to supply such goods to his customers. Producer of colour, manufacturer and vendor of paper should all be compelled by law to guard themselves against any contamination at their own risk. How soon will our Legislature recognise the necessity for action? and still more to the point, How soon will it be possible to avail ourselves of the results of such action? Architects and doctors, in the aims and daily work of their respective callings, are so frequently brought more or less into association, that they might profitably combine to render any proposed measure thorough and efficient.



## NOTES AND COMMENTS.

A MEETING of the committee appointed to administer the Lord Mayor's Fund, for the relief of people who were sufferers by the recent earthquake in Essex, was held on Tuesday. It was reported that an examination had been made of 745 houses and cottages, 18 churches, 10 chapels, 11 schools, and 11 parsonages. In some cases it was resolved to pay the whole cost of the repairs out of the fund, and in others three-fourths, one-half, or one-fourth cost, according to the circumstances of the occupiers. By this arrangement 4,268*l.* will be appropriated. The cost of repairing the churches and chapels has been estimated at 4,041*l.* Already a sum of 9,900*l.* has been collected.

THE international exhibition which is to be opened at Antwerp on May 2, 1885, will embrace all industrial products, all goods forming objects of commercial transactions, and all objects and appliances of interest to navigation. The purpose of the enterprise is to favour and develop international exchanges. The executive committee appeal to all nations, and hope that by the number and merit of their exhibits, they will vie with each other to unite at Antwerp in 1885 an attractive collection of all the products that interest the commerce of the world. The principal building will be of large area, and will be constructed by the three greatest metallurgical establishments of Belgium. The executive committee are in a position to affirm that the whole of the works will be completed within the appointed time. The Belgian Government will take steps for the due protection of inventions, industrial designs, or models, as well as trade marks represented at the exhibition.

MANY of our readers will regret to read of the death of Mr. RIDGWAY K. LLOYD, of St. Albans. His contributions to archæological knowledge showed the results of well-directed studies carried on with ardour, not only among documents, but with constant reference to the actual buildings. The book on "St. Albans Abbey in the Year 1428" will be a lasting and pleasant memorial of his method, of his precision and love of detail, and at the same time of his capacity for taking general views and making deductions from analogy. Mr. RIDGWAY LLOYD had been for a number of years one of the honorary secretaries of the St. Albans Architectural and Archæological Society, and took an active part at its meetings, reading papers of great interest from time to time. To his personal friends his loss will be great. The town of St. Albans and the neighbourhood may be said to have gone into mourning for him. His very large practice as a surgeon had brought him into constant contact with all classes, and he was much esteemed and liked. His age was only forty-one years. Typhoid fever was the cause of his death.

ONE of the few instances in which as yet there appears to be any attempt to decorate the interior of the houses in the Old Street at the Health Exhibition in accordance with the exterior, is in the shop appropriated by the "Worshipful Company of Playing Card Makers." It has been fitted up roughly, but effectively, in a manner becoming the occasion, under the direction of Mr. LEWIS F. DAY. The treatment of the roof, with its simple emblematic decoration, and the frieze with its appropriate quotation from POPE's "Rape of the Lock," is at once quaint and decorative. In the central window occur the arms of the company executed in stained glass. The lower walls are to be furnished with a collection of ancient playing cards, arranged by Mr. O. CLULOW, a member of the court of the company.

THE financial success of the MEISSONIER exhibition has been gratifying to the artist as well as to all who are concerned in the Charitable Refuge. If the sum received on the opening day is included, the receipts for the first fortnight have amounted to 55,184 frs. The charge for admission is 2 frs. on weekdays and 1 fr. on Sundays.

IN accordance with the report of the Minister of Public Instruction and Fine Arts, the Municipal Art School at Aubusson (Creuze) has been recognised as a national establishment, under the title of the National School of Decorative Art. The decree of the President indicates the desire of the Republic to foster native industries, but it is to be hoped that the independent spirit which is found in Aubusson may be never subdued under the weight of Government protection. The

tapestries of Gobelins and Beauvais were for many years inspired by the taste of the Court, while in Aubusson there was always more freedom without any loss of art. The town has, besides, shown remarkable enterprise in producing tapestry of a kind that corresponded with the public demands, and at the present time a large number of weavers find constant employment there.

THE Italian Government have approved of several schemes for new works in Genoa, which will greatly alter the appearance of the superb city. The fortifications on the east side of the town known as the "Fronti basse" are to be pulled down, and the ground gained will in part be converted into a military parade ground, and the rest will be appropriated as building sites. The "Marble Walk," which extends round the bottom of the harbour, is also to be pulled down, and the space gained given up to trade. The custom-house is to be removed to a new and more suitable building, and the present one, which is the famous old Bank of St. George, will be turned into an art museum. Many other changes are to be made, with a view of fitting Genoa for its increased and increasing trade; and some of these changes will unfortunately do away with much that is picturesque and recalls the great days of the old Republic. But modern trade is inexorable. Space was required and could be obtained in no other way, unless the Genoese had consented to shift their commercial centre to Sempierdarena, where there is still a considerable area of flat ground unoccupied, and which, sooner or later, must be utilised.

A CIRCULAR has been issued, which bears the names of the principal artists and authors in Paris, asking for aid to erect a memorial of EUGENE DELACROIX, who is rightly described as the "grand peintre dont se glorifient l'art et la France." It is also signed by Sir FREDERICK LEIGHTON, P.R.A., who has been an officer of the Legion of Honour since 1878, and Sir RICHARD WALLACE, whose name is powerful in France. That DELACROIX deserves a memorial is beyond a doubt. His works may never be popular, for he cared more for colour than for form, or the representation of incidents. His pictures are experiments, and, generally, no man was more dissatisfied with them than was the author. But the characteristics which have diminished the popularity of DELACROIX have endeared him to artists, and he has a claim to be called the painters' painter. There is one great obstacle to the project. DELACROIX in his will prescribed the style of his monument, but he sternly enjoined that there was to be no statue or portrait in relief. It is, therefore, requisite, if the artist's wishes are to be held sacred, that the memorial should be emblematic. Another question is the site. DELACROIX occupied a modest studio in a house in the Rue Furstenberg, an out-of-the-way court, leading from the Rue Jacob. There is an open space which would serve for the site of the memorial, but in that position the work would be seen by few. The Committee will have to seek a site, and for many reasons they will have to restrict themselves to the St.-Germain district.

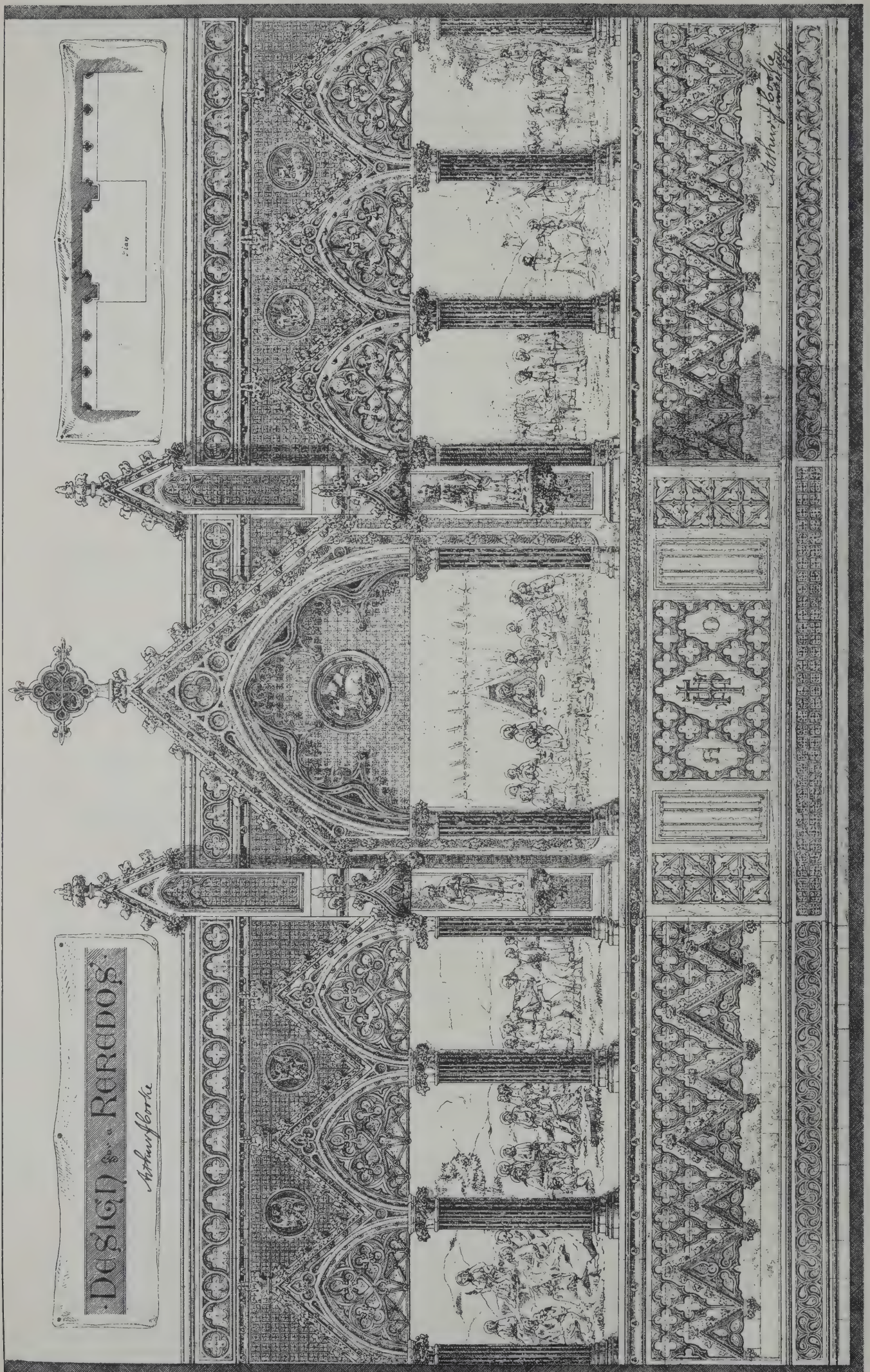
THE Metropolitan Board of Works have during the past year received 330 applications for the erection of buildings beyond the general line of frontage, of which 177 were granted and 153 refused. For the construction of porticoes, balconies, and verandahs, 118 applications were received, of which 81 were granted and 37 were refused. There were 134 applications for approval of plans for the formation of new streets, of which 69 were granted and 65 refused. The total length of the new streets sanctioned during the year is about 19 miles. On the other hand, permission was given for the closing, either wholly or partially, of about 120 streets.

THE return of the fees received by the district surveyors of the metropolis in 1882 has appeared. In that year there were 9,853 new buildings, on which the fees amounted to 22,482*l.* 19*s.* 3*d.* The fees on additions and alterations were 14,265*l.* 3*s.* 5*d.* The amount paid for arrears was 13,533*l.* In the sixty-nine districts the total received was 50,281*l.* 5*s.* 6*d.* The value of the surveyor's office varies considerably. The gross fees received in twenty-nine districts during 1882 ranged from 73*l.* to 589*l.* In two of those districts the receipts did not amount to 100*l.* each; in three districts the receipts were less than 200*l.* each; in nine less than 400*l.* each; in five less than 500*l.* each; and in ten less than 600*l.* each. In thirty-eight districts the receipts ranged from 616*l.* to 2,170*l.*

























ST. PAUL'S VICARAGE, FOREST HILL.

VIEW FROM ROAD  
E. W. MOUNTFORD  
HERBERT D. APPLETON, JOINT ARCHITECTS.





ST. PAUL'S VICARAGE, FOREST HILL.

VIEW FROM GARDEN.

E. W. MOUNTFORD.  
HERBERT D. APPLETON } JOINT ARCHITECTS.









VIEW FROM NORTH-EAST.



VIEW FROM NORTH-WEST.

*Sprague & Co. 22, Marins Lane, Cannon St. E.C.*

NORMAND MEMORIAL HALL.  
R ROWAND ANDERSON, ARCHITECT.















## ILLUSTRATIONS.

ST. PAUL'S VICARAGE, FOREST HILL, KENT.

THIS vicarage, for the Rev. FRANK JONES, has been recently completed from the designs of Mr. E. W. MOUNTFORD, A.R.I.B.A., of 22 Buckingham Street, Strand, W.C., and Mr. H. D. APPLETON, A.R.I.B.A., of the Wool Exchange, Coleman Street, E.C., who were the joint-architects. The builder was Mr. WILLIAM ROBINSON, of Lower Tooting, S.W. The walls are of yellow stock bricks, with red brick arches, quoins, &c., the gables being hung with Kentish tiles and the roofs covered with Broseley tiles. The internal joinery is of pitch pine. The illustrations are from drawings by Mr. J. STONIER.

NORMAND MEMORIAL HALL.

THIS building is arranged as a public hall for a northern village, and has been designed by Dr. R. ROWAND ANDERSON, architect, of Edinburgh.

BISPHAM PARISH CHURCH.

THE new building occupies the position of the previous church, the old foundations being utilised. The plan comprises nave with south porch, chancel, organ chamber, and vestry. The tower is at the west end, forming the principal entrance. By an oversight it is described in the illustration as forming part of the south-east instead of the south-west view.

The internal masonry is from the Stourton quarries, the external from Longridge, with parpoint walling. The roofs are of pitch-pine framed open timbered. The windows of chancel and some of the nave are filled with stained glass. The chancel is laid with encaustic tiles, and the church warmed by means of hot-water apparatus.

The church has accommodation for 311 persons. The building was commenced in 1880, and completed the end of last year. The total cost has been about 3,500*l.* The works were carried out from the designs and under the superintendence of Mr. JOHN LOWE, F.R.I.B.A., Manchester.

OATLANDS WESLEYAN CHAPEL, HARROGATE.

THIS chapel, which has been recently erected, occupies an irregular site which called for a special treatment. The buildings, as seen from the Leeds Road, are somewhat quaint in outline. The west end, with its high-pitched gable and two three-light tracery windows, forms a good foreground for the receding side elevation, pleasingly broken by the entrance-porch, beyond which are placed the two vestries. The materials used are brick and stone dressings, the windows being filled with leaded lights. The interior is 56 feet long by 32 feet wide, and gives accommodation for 300 persons. The rostrum and communion table are of pitch pine and English oak, with Lincrusta Walton introduced in the panels. The east wall is broken by an arched recess, within which is placed the seat of rostrum; the roof, of hammer-beam construction, is ceiled at collar. Ventilation is obtained by fresh-air inlet flues and outlets in roof. The work was carried out by local contractors under the superintendence of Mr. JAMES WILSON, architect, 12 East Parade, Leeds.

RHONDDA JOINT CEMETERY BUILDINGS, GLAMORGANSHIRE.

THE above have recently been erected for the Burial Board, in compliance with the requirements of a rapidly increased population, and are situate on rising ground in the midst of the colliery districts. The mortuary chapel (which is used by all denominations) is entered from the south porch under tower, which also serves as a coffin rest for extreme cases; immediately opposite is the exit to burial grounds. The plan consists of a nave with central aisle, with a chancel and vestry at eastern end. All the seats, pews, &c., have been executed in pitch pine. The roof is diagonally match-boarded in panels, with moulded ribs, &c. The reading-desk is of English oak, and carved. All the exterior dressings and tracery have been executed in finely-tooled forest stone. The walling is of blue pennant, with main angles drafted, the voussoirs being relieved alternately with Bridgend stone. The spire is covered with cleft English oak shingles, 10 inches by

5 inches by  $\frac{3}{8}$  inch. Seating accommodation is provided for 200 persons. The total cost of chapel, including caretaker's lodge and entrance gates, has been 2,700*l.*

The work has been carried out by Mr. H. KRILL, of Tonypany, from the designs and under the superintendence of the late Mr. WILLIAM H. JENKINS and Mr. THOMAS R. PHILLIPS, joint architects to the Board.

DESIGN FOR A REREDOS.

## THE ART FOR SCHOOLS ASSOCIATION.

A REPORT has been given of the work done by this excellent society during the first year of its existence. The means placed at the disposal of the association have not so far been large, amounting altogether to 191*l.* 10*s.* 6*d.*; but inasmuch as the principle of the committee has been to assist chiefly those schools that were ready to make an effort to help themselves, it has been possible to carry out satisfactorily a part at least of the original programme.

The readiness with which a number of the leading print-sellers and publishers associated themselves with the objects of the committee permitted the latter to select a large number of works of art, prints, etchings, photographs, &c., and to offer them to the friends and managers of elementary schools at prices not prohibitory. Of these works of art, numbering upwards of 150, an exhibition, chiefly intended for the information of school managers and teachers, was held in the winter at the rooms of the Fine Art Society, and a catalogue was issued giving short descriptions of the pictures and their artists, and stating the reduced prices at which elementary schools might purchase various groups of works through the agency of the association. At the close of the exhibition the pictures were removed to 29 Queen Square, Bloomsbury, where they now form a standard specimen collection from which choice may be made by schools desiring to purchase.

The result has been a steadily increasing demand for the works recommended by the association. The London School Board has warmly assisted the movement. The Birmingham School Board has also given support. At Bradford a branch committee has been formed, and an exhibition, following in some respects the lines of the London exhibition, but in others greatly improving on them, was held six weeks ago in that town. Other large towns have shown great interest in the project. Since the beginning of the year the Art for Schools Association has issued more than 800 pictures, of which over 600 have been supplied to elementary schools in London and another 100 have gone to schools of the same class in various parts of England and Scotland. But though the committee aims first at serving elementary schools, it does not propose to confine its usefulness to that class, and, accordingly, under certain restrictions, some middle-class and a few charity schools have been allowed to share in the benefits procured by the association. Finally, a few private schools, though of necessity excluded from the special pecuniary advantages open to elementary schools, have been glad to avail themselves of the help of the association in selecting and purchasing suitable pictures.

So far the conduct of this business agency has been the principal work of the committee. It is not, however, all the work that the association aims at doing; and the committee are now beginning to form special loan groups for circulation among schools which cannot afford to purchase them even at reduced prices. In order that the public may have a fair opportunity of judging of the initial work of the association, five of these groups are being shown in the educational section of the International Health Exhibition. They may be found on the walls of the newly-erected technical schools, to be opened in the course of a few days as an annexe to the other buildings.

In all its work, and especially in this very important department of forming loan collections, the association is much hampered by want of funds. The whole sum so far placed at the disposal of the society by voluntary contributions amounts to less than 200*l.* Seeing that no profits are made on the sale of pictures, all office expenses, as well as those of the Winter Exhibition, of advertising, of correspondence, and of the purchase of loan collections have had to be met by these receipts. It need hardly be said that under these circumstances the incomings have barely covered the outgoings; it has been impossible up to the present moment to employ any paid service.

It is obviously impossible for the association to develop its full powers of usefulness while thus hampered, and it becomes necessary to appeal to the public for more liberal pecuniary support. It is estimated that an assured annual income of 200*l.* would enable the association to carry on its present work with comparative ease; with less it can hardly continue to exist. Subscriptions and donations should be sent to the hon. treasurer, Mr. Wynnard Hooper, 2 Pembroke Gardens, W., or to either of the hon. secretaries, Miss Mary Christie, Kingston House, Kew, and Mr. Lionel G. Robinson, 19 Kensington Square, W.



## WATER SUPPLY IN ENGLAND.

A LETTER from Mr. Baldwin Latham, C.E., has been published, in which the writer says that from observations which he has been conducting for some years in various parts of England, he is able to point out that if a line is drawn north and south through Leicester, in all places near that line the quantity of underground water stored in the new red sandstone, oolite, and the chalk is about equal to its normal quantity at this period of the year; in places to the west of this line there is an increase of water beyond the normal quantity, while in places to the east, there is a marked deficiency in the quantity of water stored in the ground. The springs in the chalk in the North Downs, which furnish the perennial supply of water to the streams of Surrey and Kent, are now at a lower point than they have been at any corresponding period for many years past, and we shall probably have this year a smaller flow in the River Thames than has occurred for a considerable period. At the present time the upper tributaries of the Thames, taking their supply from the chalk of Wiltshire, contain an abundance of water—more than at the corresponding period last year—but as we pass eastward towards London, the supplies are of a limited character, and, in all probability, within the area of the River Lea, we shall have this year a lower state of the water than has been recorded for many years past, as within the drainage area of this river and north of it, passing into the oolite districts of Northamptonshire, there is a marked deficiency in the quantity of water stored. From records of underground water, it appears that there is a marked deficiency of water in the ground every ten years: for instance, there was a deficiency in 1854, 1864, 1874, and, in all probability, this low water will occur again this year. Although it is most marked at the present time in the south-east districts of England, yet from the rapidity with which the springs are now falling in other parts of the country, the evidence all points to a general low state of the water in the autumn of this year.

Whenever the water in the ground has reached a considerable degree of lowness, when replenishment commences, in all places in which the water is liable to pollution we have the conditions which bring about epidemics of typhoid fever, and it therefore behoves all persons who are suspicious of the quality of their water supply to take the precaution to have all water used for dietetic purposes boiled before it is used during such periods as we are now entering upon. By adopting this precaution, much illness and suffering may be prevented.

## WENLOCK ABBEY.\*

WILLIAM OF MALMESBURY'S account of the history of this abbey, together with the assumption that it was originally founded by St. Milburga, A.D. 680, is commonly accepted. But this assumption appears to have been started not earlier than the fourteenth century. At all events, St. Milburga became its abbess, and was such at the time of her death in 722 (according to some writers), and she was buried here. Her parents were Merewald (brother of Wulphere, king of Mercia, who commenced his reign about A.D. 657), and Ermenburga (daughter of Ermenwood and niece of Earconbert, king of Kent, who began his reign A.D. 640). Her mother founded a monastery in the Isle of Thanet, and others of her relations seem to have done many pious acts for the Church. It is not recorded when St. Milburga presided over the nunnery, but it is considered not to be before A.D. 694. From the death of St. Milburga to the year 1071, when it was surrendered to King William I., the history of the abbey is veiled in darkness; but it is said that it was refounded in A.D. 1017, in the reign of Edward the Confessor.

At the time of the compilation of Domesday Book, the whole of the lands of this church were in the hands of Roger de Montgomery, the first Earl of Arundel and Shrewsbury, to whom they had been granted by the king. From him they passed again in the reign of King William II. to the new Order of Benedictine Monks of Clugny as a dependency to that Order. This affiliation continued for three centuries—not, however, directly to Clugny, for the actual ownership was in the Priory of La Charité-sur-Loire, which was again subject to Clugny. From the entry in Domesday Book it is certain that the Saxon church was actually in existence at its date. William of Malmesbury, writing about 1125, says "a convent of Clugniac monks was established there while a new church was erecting." By the discovery of the body of St. Milburga during the erection of the new church, the reputation and profits of the monastery were greatly enhanced. Her body was re-interred in front of the high altar on May 26, 1101. The priory was naturalised in the 18th of Richard II. Its revenues and patronage were assumed by the English kings. It grew in wealth and importance, and its precincts extended over thirty acres. Other priories were affiliated to it. Its benefactors were numerous, and Isabel de Say, Lady of Clun, was (after Earl Roger) the greatest.

\* From a paper read by Mr. Charles Lynam, architect, to the members of the North Staffordshire Field Club.

She, at the end of the twelfth century, endowed the abbey with large and valuable patronage. King Henry III. repeatedly took up his abode at Wenlock. In 1333 its wealth was so increased that in a contribution on the marriage of Edward III.'s sister it stood tenth in importance in the kingdom. In 1337 the first blow was struck at its liberty, and attacks were repeated till they reached their climax two centuries afterwards.

The priory was never exalted into an abbey. Its surrender occurred January 26, 1542, when the value was returned gross at 481*l.* 16*s.* 3*d.*, and the prior, John Baylie, received a pension of 30*l.*; the sub-prior 6*l.* 13*s.* 4*d.*, seven priests 6*l.* each, and four others 5*l.* 6*s.* 8*d.* each. Thus, in lieu of their large revenues, these thirteen men received 100*l.* amongst them. The Clugniac Order was a reformed branch of the Benedictine, whose black robes they retained; their rules were more rigid, and their food and clothing more scant. Stringent rules with regard to silence were a distinguishing mark of the Order.

Turning now to the buildings, it need hardly be said that nothing remains of the Saxon church at the present time; the oldest buildings now to be seen are the chapter-house and the block running east and west adjoining it, variously called the "Infirmary" and the "Guest House." These probably date from the time of Roger of Montgomery. The church appears to have been begun at the east end and to have proceeded westward. The lady chapel was a subsequent addition of the fifteenth century. The church consisted of a choir of seven bays with north and south aisles. Transepts with three eastern chapels to each, and with a covered arcade of three bays to the west, that on the north side having a crypt beneath it and that on the south being open to the cloister. Nave of eight bays, with aisles. A north porch and a chamber of three bays over the west end of the north aisle. There were stair turrets at the south-west angle of the nave, at the north-east angle of the nave, and at the north-west angle of the north transept. At later dates were added the lady chapel at the east end of the choir and a building of seven sides to the south of the south aisle of choir. Near this building is the base of the wall of an isolated structure, the use of which is not apparent. In section, the church throughout consisted of a main arcade—a triforium and a clerestory, and there were two passages round the buildings within the thickness of the walls, one at the level of the triforium and the other at that of the clerestory. The several staircases led to these passages.

The whole area of the church—nave and aisles, choir and aisles, central tower, and transepts and chapels—seem to have been groined throughout. The total length of the church was 332 feet, and the width, including aisles, upwards of 61 feet. The width of the church across the transepts was 144 feet. The height to the vaulting of the nave is said to have been 60 feet. The main entrance into the church was at the west end of the nave; the jambs on the south side still remain, showing it to have had six orders of mouldings; also an entrance from the west walk of cloister, which still remains intact, and probably another from the east walk of cloister. Through the care of the present owner, every part of the original church may now be traced, as the foundations have everywhere been disclosed, and it is somewhat extraordinary that in no case have the lower part of the walls been entirely removed. They appear to have been buried for many years, but have been gradually uncovered with care and caution. Here it may be permitted that a tribute of gratitude be paid to the owner, who, it is evident, religiously preserves everything that comes to light belonging to the abbey, and insists upon such rules being observed as contribute to that end.

The principal remains at the present time consist of the southern half of the west front, with three bays of the south aisle, including the chamber over them, the three walls of the south transept, and the west wall of the north transept. It is curious that features which are peculiar to this abbey should have become its most lasting remains, but so it is. The unique room at the west end of the south aisle, the equally unique arcadings on the west of the transepts, have, by their extraordinary strength of construction, kept together the only parts of this majestic structure which enable us to form an idea of its magnificent proportions, its marvellous constructive skill, and its artistic beauty. The exact uses of these peculiarities have not, after all the learning and acumen bestowed upon them, been revealed to this day. The chamber at the west end has been put down as "a vestry," "a chapel," "a court;" but no conviction has yet been conveyed by these guesses. The arcading west of the transepts has in like manner been construed as "accidental" and as the site of "altars," which in the case of the southern ones would have been open to the cloister walk. They have also been called places of retirement for scribes or more studious monks. After all the exercise of critical intellect on this point, it will be put down as very presumptuous if I venture on a suggestion; but an idea has occurred to me, and I make bold to express it. As to this work being "accidental." The builders of old did mighty little that was "accidental." They had purposes to fulfil: they knew what they were, and they met them with reason and with consummate skill.

Now what I venture to suggest is that the reason for this arcading was not one of plan or of accommodation, but of "structural necessity." Look at this building as it originally existed,



and you will find that the highest and longest length of walling without lateral support would have been the western flanks to these transepts. Think of the weight and thrust of the vaulting which would have been thrown upon these walls, and you will agree with me that some extraordinary support was necessary at these points. But it may be asked, What about the other side of these walls? and the answer is that to them the chapels rendered the needful counterfort. Again, perhaps others may ask, Why not have put buttresses? Well the works of the monks in these buildings answer this emphatically. A buttress was not their idea of counterfort: there is scarcely a buttress about the whole church which projects more than the length of one's hand, but means of extra strength are supplied in another, and, as I think, more artistic manner. The gable of the north transept is built against the chapter-house. In order to secure sufficient strength here, this wall was thickened by a series of arches—so in the west wall of the north transept. On these grounds I suggest that the arcadings west of the transepts were erected for the purpose of structural stability, and I point to their existence at the present day in support of this. That the extra stability given by the construction of the chamber at the west end of the aisle accounts for its existence now there can be no doubt.

The windows in the south gable of the transept still remain, and are of single lights; those to the room over the south aisle are of two lights, with early tracery in their heads, whilst the west window of south aisle is a small single light, with semicircular head. The south jamb of the great west window still remains, and shows the mortices for the cross-bars to which the glazing was attached. The west wall is 7 feet 3 inches thick, and has ashlar facing outside with wide-spreading base weatherings. The wall of north aisle is 4 feet 9 inches thick, with ashlar facings outside and rubble inside. The north porch walls are 3 feet 9 inches thick. The character of the masonry to lady chapel differs from the other parts of the buildings. Its buttresses have much greater projections; the walling is built of stones much larger in size, and its base moulding is of fifteenth-century work. In length it appears to have been of two bays only. There are many fragments of fifteenth-century mouldings placed about its walls, on some of which the marks of the masons are still to be seen. There is evidence of the rubble facings inside having been plastered, as fragments of it are still visible in various parts.

The interior effect of this church must have been extremely magnificent. The long vista of its arcades of nave and choir, with its height of triforium, clerestory, and vault, crossed in the centre by the great central tower and transepts on either side, its grandeur of proportion and delicacy of detail must, indeed, have embodied a building the like of which is but rarely to be seen. Little did the men who raised its walls and poised its vaults think that their work would for centuries remain but a mere useless ruin—useless in respect of the purpose for which they toiled, but not as demonstrating their own matchless skill. Next to the church, the chapter-house, of still earlier date, calls for observation. It was a quadrangular room, with three open arches to the west and windows to the east. It was divided in its length into three bays. The lower part of its walls are perfectly plain and built in coursed rubble; the upper part is arcaded, starting from an enriched string. Above the arcade are two tiers of intersecting semicircular arches, delicately moulded, which give great richness to the wall facings. The lower part of the groin ribs are still to be seen. Though there is much symmetry of treatment in this apartment, there is also a great variety, and that where it would be least expected. The eastern bay, though in effect uniform with the others, is even in the main arcade quite different from them: instead of triple shafts, it has single shafts with carved enrichments. In the arch mouldings of the south wall there are carvings not seen in the north side. In this wall there is a stone lintel to a former opening, which shows that, though the builders delighted in the use of the arch, they did not refuse the square lintel when it was necessary to construction; and their sculptured treatment at this stone again exhibits their skill. From the south wall of the transept there were doorways into the roof above the vaulting.

The interior of this chapter-house is another display of the fondness of the twelfth-century designers for decorative effects, and again shows that, though they employed massive and ponderous construction in the main features of their buildings, they knew full well how to deal with lightness and delicacy where enrichment was desired. The apartment over the west end of the south aisle next claims attention. It appears to have been used as a place of assembly of some sort, as its walls have stone benches along them. It is divided into three bays, and its groining still remains. On its south side it has an entrance and two windows of two lights each, and at the west end it has also a two-light window, and near it a doorway leading to the staircase which communicated with the triforium and clerestory galleries. The workmanship, proportions, and detail of this room are equal to anything that elsewhere remains. There are evidences of the existence of a lean-to roof to the cloisters, and the foundations to the buildings west of the cloister garth are now disclosed. Within the cloister garth, and near the west walk, the lavatory of the monks is still to be seen in its lower part, and very beautiful and elaborate are its

several features. On the south side of the cloister was the refectory, a noble apartment of lofty proportion, with a groined roof. To the west of this was the kitchen, but very little remains of it. West of the buildings which formed the west flank of the cloister are the foundations of an isolated work which appears to have been a Calvary cross, and would be in view immediately the entrance to the abbey was approached. This entrance lies still further to the west, and is marked by a single tower with doorways on two or more sides. At the angle next the present schools there is the spring of an archway which may have formed that of the great gateway. To the south of the chapter-house and some distance from it there is a building which has been called the "Infirmary," and it has features of great interest about it. On its western flank are sundry corbels which appear to have carried roof timbers. The house now occupied by Mr. Gaskill is constructed out of a building of the same date as the chapter-house, which appears to have been two storeys in height from the first, and has massive walls pierced by windows on both sides with a doorway on the south side all of Norman character, and of the abbot's dwelling, a building of late fifteenth-century date. Its rooms look east, and are approached on the two floors from a long corridor on the west side. This wing of the buildings is picturesque, and now forms the greater part of the remains. In it is the abbot's chapel with its original altar. It is a good example of what may be called a domestic chapel—placed within the house—easy of access, unobtrusive, yet emphasising its special purpose. Of the outworks of the abbey precincts there are many indications, but they are not to be detailed here. In the boundary wall to the east there is a projection which appears to have been rendered necessary by the erection of the lady chapel, which was an extension eastward from the original east end of the church. Fragments of all kinds are carefully stored in the arcading west of the south transept, and serve to assist the imagination in re-edifying this once artistic and effective religious house.

#### THE LATE ARTHUR PERIGAL, R.S.A.

THE Royal Scottish Academy has, says the *Scotsman*, lost another of its older members by the death of Mr. Arthur Perigal, which took place quite unexpectedly at an early hour on the 5th inst. The son of an artist bearing the same name, who had come of an old Norman family driven into England by the revocation of the Edict of Nantes, Arthur Perigal was born in London in August 1816. He was yet a lad when his father removed to Edinburgh, and established himself in what ultimately became a very good connection as a teacher of drawing. While largely occupied in teaching, the elder Perigal, who had studied under Fuseli at the Royal Academy, and had for some time practised portrait painting in London, would seem to have continued assiduous in the use of his pencil, and from 1833 onward exhibited at the Royal Scottish Academy portraits and landscape subjects, which earned him some reputation. Under his father's instruction, young Arthur early commenced the practice of painting, and appears from the first to have devoted himself almost exclusively to landscape. He also followed the paternal example in becoming a drawing master, in which capacity he had, we believe, for many years a highly successful career. Meanwhile he had the good fortune to obtain early recognition for his own artistic efforts. His name first appears in the Academy catalogue for 1838, in connection with a study of John Knox's pulpit and several renderings of Trossachs scenery; and from that time forth he continued a regular and liberal exhibitor. The year 1841 saw him elected an Associate of the Academy, in 1868 he attained the full status of an Academician, and, four years ago, on the death of Mr. Charles Lees, he was elected treasurer to the corporation. During the half-century or so over which his artistic activity extended, his industry seems to have been indefatigable. He has been heard to say that, from the time when he could claim a place upon the Academy's walls, he always contributed his full quota of work; and if that be so, the number of landscapes exhibited by him from first to last must have exceeded three hundred. Fond of travelling, he roamed in search of subjects over all parts of Scotland; while making occasional raids into the mountainous districts of England and Wales. Switzerland and Italy were repeatedly visited and laid under contribution for sketching purposes; and he also made an extensive tour in Norway, which afforded him abundance of congenial material. The fruits of all these journeys were to be seen from year to year in his exhibited pictures. While naturally ranging, in the course of such varied practice, over a considerable diversity of subjects, he always showed a special predilection for the loch and mountain scenery of the Scottish Highlands; his favourite effects being those in which cloudy skies afford a lively interchange of shade and sunshine. He was also very partial to the banks of Tweed and Teviot; a constantly recurring subject being a fine reach of fishing water, with an angler plying his craft, to suggest what in the artist's eyes was by no means the least attraction of the scene. Roman and Venetian views were of less frequent occurrence, and generally on a comparatively small scale; but Norway furnished



the themes of several large canvases, including an effective picture of Romsdale produced some years ago, and a striking glimpse of torrent and mountain submitted in the recent exhibition. Commencing when he did, Mr. Perigal naturally fell under the not altogether beneficial influence of Macculloch. He early formed a decidedly individual manner, which seemed to aim at brilliancy and sparkle, and attained results that were more popular in the artist's young days than they have been since our painters began to cultivate, and the public to desiderate, a closer reference to natural colour and effect. Among the best of his oil paintings were, perhaps, to be ranked his representations of Border scenery; of one of which, exhibited within the last two or three years, affording from under trees a far-stretching view of rolling champagne and blue hills, we retain an agreeable impression. His water-colours, generally speaking, showed a breadth and transparency of effect not always realised in the other medium; and his studies from nature are said to be vigorous and telling, some of the sketches made in Venice being specially noteworthy for the effectiveness of their perspective. Personally, Mr. Perigal was a man of kindly and genial disposition, whose companionship was prized by all who knew him.

### STRATFORD-ON-AVON PARISH CHURCH.

THE representatives of the Society for the Preservation of Ancient Buildings who were deputed to examine Stratford-on-Avon parish church, have presented a voluminous report on the subject to the Restoration Committee. As the report is of great interest, not only to the parishioners but to the general public, the committee decided to defer its consideration until their next meeting. The report describes at some length the restoration work carried out forty years ago according to the ideas of the times and in the best manner, but, as regards some things, with results which can only be deplored. Some of the most important stone details in different parts of the church were destroyed to make way for new copies. Fortunately this process was not applied everywhere, and much old work still remains. After making a few minor recommendations, the Commissioners report that the roofs appear to be in a good state, but there are certain appearances on the ceiling of the nave which raise the suspicion that there may be dry rot above it. This roof should be closely examined. They add:—"The roofs of the aisles were not renewed when the others were. They are a good deal strapped and patched, but seem to be substantially sound; and that on the south has a good deal of fifteenth-century work in it. It ought not to be taken away. That on the north is modern, and without any architectural character to mark its date. There would be no harm in replacing it by a better if it is wished to do so. The tower is cracked in various places, and some of the arches in it are crushed out of shape; but we cannot find that any movement is now going on. Plaster patches were put on the cracks in 1872, as appears by the date scratched on them. Many of these are not broken at all, and the rest have only slight cracks, which would be accounted for by the movement of the bells. There is the beginning of mischief in the tower, and it should therefore be carefully watched; but it does not appear to be now in a state which need cause anxiety. The spire is built on brick pendentives, which exert an outward thrust, and to counteract it iron ties and beams have been placed across the tower in both directions. This was probably done at the time when the spire was built, and it would be well to examine the ties, and, if necessary, to renew them." The Commissioners remark that the adaptation of the church to the requirements of the present day might, if properly managed, be made the means of bringing more into view its architectural merit and historical interest. In their recommendations the Commissioners state:—"The removal of the side galleries would be in many ways a gain, but it must be kept in mind that they cannot be taken away without reducing the nominal accommodation of the church. As it is now fitted up, the floor of the nave and aisle seats about 800 people, and although it might be rearranged on a better plan, the numbers would remain about the same. The galleries hold about 470. If the transepts were used for congregational purposes they would hold about 250, so that there would be a net loss of more than 200 on the removal of the galleries. If this loss cannot be afforded, the galleries, or part of them, should be kept, for any enlargement of the fabric for the sake of getting more seats is in this case quite out of the question. The only addition to the church which ought to be allowed is that of a vestry, which might be built on the north side of the chancel, where an ancient vestry once stood, the foundations of which remain in the ground, and its doorway in the wall of the church. A place ought also to be provided for the safe-keeping and exhibition of detached fragments of ancient work, of which there are some of considerable interest in the church, especially the fragment of a font—probably, as has been suggested, the font in which Shakespeare received baptism. This, it is stated, is too much broken to be put in use again, and could not be restored except by destruction. It should be placed in some part of the church where it can be seen, and where it will be safe, not in a dark corner where lumber is piled as now behind the organ. With

it should be placed the original heads of the sedilia from the south aisle, and such other relics of the same sort that lie about. As a final recommendation, the Commissioners say:—"The old glass now in the window of the Clopton Chapel should on no account be removed. It is scarcely necessary to add that all monuments and gravestones should be kept in their present positions. The fact that some of the latest monuments are the most out of harmony with the building suggests that it would be well to exercise a strict control over the admission of any such for the future. . . . It is a pity that so fine a building as this should be disfigured by the indiscriminate acceptance of well-meant but ill-judged gifts to it. When such things have been admitted their removal is often difficult, so that too great care cannot be used about them at the beginning."

### NOTES ON HERALDRY.\*

(Concluded from page 377.)

THE more you study good examples of blazon, the freer and more spirited will your treatment of charges become. Without this study the only safe way is to keep closely to the letter of your authorities. In every case, however, when you employ any armorial detail make sure that your authorities are trustworthy. During the last century the history of a city in the south of England was published, giving an incorrect engraving of the municipal arms. This has been unfortunately copied ever since, and the false coat appears frequently upon the Guildhall and other public buildings of the town. From what I have seen in various buildings, it seems necessary also to express a hope that purely imaginary coats of arms may not be considered admissible decorative features. I do not refer to those arms which may be assumed by a client without any right to the same (I do not think an architect could safely interfere in such a case), but I mean arms purely fanciful, designed out of mere wantonness. A short time since I noticed the spandrels of an entrance archway filled in with shields; one of these bore a bend, and the other, to balance the composition, a bend sinister! Another instance I can recall where the cornice of the tower of a modern house was "decorated" with escutcheons, each bearing a different ordinary, but in every case charged with three annulets or rings. Here, also, I would enter a protest against the common practice of making the shield receive monograms, dates, &c. Surely the invention of any designer should be sufficient to suggest some other form of panel than the shield to receive such details. Then, again, as a general rule, do not use a plain shield without charges as a decorative feature. This is, of course, constantly done, for a shield seems to be considered the right thing to fill up any panel or odd corner; but wherever possible let it do its proper work—that is, display a coat of arms. The crest was a cognisance or device borne upon the helmet, and it is now usually so represented surmounting the escutcheon. Although sometimes it issued from a coronet, cap of maintenance, &c., it usually stands upon what is called a wreath placed on the top of the helm. The wreath is composed of two twisted strands of silk, one tintured with a colour, the other with a metal, six folds being usually shown. It is now almost invariably drawn after one model; but a study of old carvings will suggest several legitimate variations, especially one form with more open twisting and with loose ends. Also compare the jewelled and enriched wreaths upon the effigies at Lowick Porlock and Bromsgrove churches, &c.

The crest is now very commonly drawn with the wreath only, the helmet being omitted. Although when it is only desired to exhibit the crest the helmet need not necessarily perhaps be always represented, still the two ought to go together wherever possible. When the crest surmounts the coat of arms, I think the helmet should always be drawn in its proper position, resting on the top of the shield, and bearing the wreath and crest. Never on any account represent a crest upon the surface of a shield as if it were a charge; this is altogether false heraldry. The form of the helmet has been made by the later heralds to denote the rank of the possessor. In Mediæval times this was not the case, and the artist was not bound by such rules. Even if, however, you do not break through the conventional usage altogether, still you can, within limits, vary the forms of your helmets. That of a gentleman or esquire is directed to be shown in profile with the vizor closed. Two types at once suggest themselves in representing this, derived from the early and later forms of Mediæval helmets. I had forgotten to mention in my remarks upon the proper representation of crests the absurd fashion of placing them within a strap or garter which is usually made to receive the motto. This custom has no doubt arisen from a foolish attempt to copy the arrangement in the arms of Knights of the Garter, where the shield is duly surrounded by the motto, "Honi soit qui mal y pense," upon its appropriate garter.

I now come to "mantling," which is used to form an ornamental background to a shield of arms. It appears, in the first instance,

\* A paper by Mr. Charles Richard Pink, read before the Architectural Association, May 30.



to have been derived from the "lambrequin," "cointise," or scarf attached to the helmet, and early examples show a very subordinate treatment of the feature in comparison with its subsequent development. Soon, however, the decorative capabilities of mantling were appreciated, and gradually were evolved those multitudinous folds, jagged and slit into acanthus-like outlines, which form so admirable a setting for the shield. The lowest points of the mantling are generally shown as terminated with tassels, often in late examples made to play an important part in the general design. In seventeenth-century work you will find examples (of which I have a few illustrations on the walls) where the original idea is quite lost, and the mantling is treated as a veritable mantel folded in different forms at the back of the shield. This treatment is not very admirable, and if used in carving the folds must be very delicate and the relief low. The effect is in many cases rather like that of a garment hung up to dry; and this idea is unfortunately only more pronounced, I think, when as in the Imperial arms of France, the mantel is "propped" with sceptres. Mantling, when artistically and vigorously treated, is undoubtedly a most valuable accessory to a coat-of-arms from a decorative point of view. The old designers lavished a wealth of fancy upon the variety of its curls and twists. Italian and late German examples are full of happy suggestion. One of the very best Old English examples may be seen over the entrance to Montacute House in Somerset, where the treatment is altogether remarkable in its freedom and richness. In the eighteenth century some palm branches enclosing the shield, and tied together at its base, formed a very common substitute for mantling. This expedient is not one worthy of imitation; but very charming examples may be found in older work, where the shield is surrounded by a chaplet of flowers. I have a sketch of a very artistic and satisfactory instance of this treatment taken from the tomb of Robert White at Christchurch, and you will notice in this case that the garland does not take the place of mantling, but is used in conjunction with it. Although rules have been laid down by many authorities for the tinctures of mantling, it would appear that they may really be left in most cases to the taste of the designer.

Supporters I can pass over with very few words. They are, as their name would imply, figures which support the shield on either side, and are, with few exceptions, only used in connection with the arms of peers. The chief difficulty in the way of their artistic representation is to find an appropriate standing ground for them. A panel or tablet (to receive the motto) is fairly satisfactory as a base, but the usual conventional riband is necessarily an unsatisfactory and weak one. The Mediæval artist often placed his shield in the position known as *couchée*, and allowed the supporters to stand upon the shield, and so support the helm and crest. This is, in many cases, by no means a bad way of meeting the difficulty. Do not confound heraldic supporters with the single figures often introduced in heraldic designs for purely artistic but not armorial effect. It was a very common practice in the Middle Ages to, in this manner, represent shields as held by angels and other figures. The old carvers and painters were also fond of hanging escutcheons by their "guiges" or straps upon trees, &c. All this kind of treatment is purely decorative, and should be made to appear so at a glance.

With regard to mottoes, a few remarks must suffice. The motto is usually inscribed upon a riband placed below the shield, but sometimes over the crest. Of course, however, it may be introduced quite independently of armorial bearings, and in any position that fancy may dictate. It is said that the "Loyal Marquis" of Winchester inscribed "Ayez Loyante" on each pane of glass in Basing House; and similarly, on almost every quarry in the hall windows at Mells, the Horners have placed their alliterative motto "Tyme tries trothe." It is difficult to give any very useful directions as to the drawing of ribands, but I may remark that they are by no means easy to design characteristically. I can only recommend a study of good examples, especially Italian and German. The works of Albert Dürer often afford suggestions for a more artistic and fanciful treatment of ribands than we usually have presented to us in modern work. Want of time prevents me from giving any account of that quaint offshoot of armoury which is exhibited in the form of Christian symbols heraldically treated. Our old churches abound in examples, but I am unable to do more than mention the subject to-night.

I hasten to the last division of my subject—viz., badges and rebuses. A badge is a family recognisance which may be treated with much greater freedom of design than the crest. Indeed it may, so long as its identity be preserved, be represented almost in any way that may suit the fancy of the designer. Badges were used for more everyday purposes than arms or crests, such as distinguishing the livery of servants or retainers, or indicating ownership of chattels, &c. It is undoubtedly a loss to modern heraldic decoration that the badge has almost fallen into disuse. It is always represented without a wreath or other accessories. Knots of different forms were commonly used as early badges, such as those of Harrington, Stafford, Heneage, &c. Royal badges in England have been numerous, and were depicted in the later Mediæval times with the greatest fancy and variety of design. The very names of some of them will call to mind their picturesque details, as, for instance, the white hart; the antelope, beacon, and

swan; the falcon and fetterlock; the rose en soleil; the angel and rose; the portcullis; Tudor rose, &c. Badges were sometimes impaled (like coats-of-arms) to show an alliance by marriage. I have a small sketch on the wall which presents Henry VIII.'s rose impaling the pomegranate of Arragon. Rebuses are familiar to all of you. They consist of a fanciful combination of objects forming pictorially a punning allusion to the name of the user, and were very commonly adopted by church builders. Examples will occur to everyone, such as Beckington, Langton, Silksteds, Hunton, Sugar, &c. The colouring of rebuses may be, of course, left to fancy, and, even with badges, in many cases the tinctures are not in any way prescribed. I may just mention here that occasionally for decorative purposes some of the principal charges of a coat-of-arms were used freely as badges upon the owners' buildings. I remember a remarkable instance of this on the Worcester excursion at Westwood Park. Here the garbs (sheaves) and mullets (stars) of the Packington arms have been used, apart from the shield, for all kind of decorative purposes.

I have now passed rapidly over almost the whole field of armorial display, and I must bring my remarks to a speedy close. Before doing so, however, on behalf of heraldry and its kindred study, genealogy, I feel constrained to say a word anent the preservation of the memorials of the dead (often rich in armorial details) existing in our churches and churchyards. That there has been great destruction of such monuments of late years there can be no doubt; I can recall myself many instances. In one church in Norfolk the old floor, rich in ledger stones and brasses, has been buried (so I am informed by a well-known archæologist) under a layer of concrete and paving tiles. As a rule in church restorations ledger stones have been removed and often destroyed, tablets stripped from the walls, and, as to headstones in the churchyard, I was once asked to use some as bonding stones in new walling. Not long since I was looking over a fine church in Oxfordshire with the rector. The building had been thoroughly well "restored," and the floor had been repaved with tiles throughout, all memorials of the forefathers of the hamlet being removed. The parson, in reply to my questions, informed me that formerly there had been many ledgers, some of them very interesting as touching upon local history and legend. He added that he now saw his mistake in obtaining a new uniform pavement. Uniformity and bright colouring had indeed been secured, but he found them, on longer acquaintance, eminently uninteresting, and vainly regretted having destroyed those old stones, which had each a story to tell of the silent past. I think it was our member, Mr. Sedding, who on one occasion, in the face of much opposition, brought the reredos and altar in a church under restoration to a forward position in the chancel rather than interfere with the monument raised against the east wall over the tomb of an ancient worthy of the parish. I, for one, am thankful for such an example as this. All monuments should, if possible, be allowed to remain *in situ*, especially if those whom they commemorate lie beneath them. In no case must there be destruction. Tablets should not be taken down and be deposited in the belfry or heating chamber, but retained on the walls. Floor-slabs should not (if they are fortunate enough to escape immediate destruction) be placed under organs and church fittings, or be slowly worn away as pavings for entrances and gangways. Our church and churchyard monuments deserve our care quite irrespective of their architectural character, which, I will admit, is often very inferior. Not to speak of the duty we owe to those who raised them, and of the respect due to all memorials of the dead, these monuments are of the greatest possible value to the local historian and genealogist, and often to the student of heraldry. A church denuded of them seems to have lost its old and pleasant associations with former generations of worshippers. I fear I have been guilty of digression, but this is a matter upon which I feel strongly, and architects may use a good deal of influence towards the preservation of these memorials. If, therefore, I have been fortunate enough to kindle among my hearers to-night any interest in this ancient art and science of heraldry, may it be shown, when occasion arises, in a strong effort to preserve those monuments which, in many cases, are not only records of old English family history, but also the best examples of that art which I have so imperfectly brought before you this evening.

## ELECTRIC LIGHTING OF MANSIONS.

THE electric light has been introduced at Linden Park, near Hawick, N.B., the residence of Mr. Walter Laing. Linden Park is about two miles from Hawick, and the house is a new one only just completed. A small stream—a feeder of the Teviot—runs through the grounds, and advantage has been taken of this to obtain power for producing electricity for lighting the mansion and stables. A turbine wheel has been erected capable of giving off about eight horse-power, and requiring about 270 cubic feet of water per minute when working at full power. As the stream will not in dry weather give nearly so much as this, a reservoir, in the shape of a small lake of about an acre in extent, has been constructed in the bed of the rivulet.



In the driest weather the stream may be depended upon to give at least 80 cubic feet per minute, and this being stored up in the reservoir during the day-time, more than sufficient force is obtained for working the turbine when the lights are required at night. The turbine is fixed in a small building, and is connected by a short belt with the dynamo, which is a Siemens' compound self-regulating machine, capable of supplying about seventy "Swan" incandescent lamps of 16 candle-power each. From the dynamo the necessary conducting wires are carried up to the house, partly on posts overhead and partly underground, branches being taken off to supply the stables and the avenue from the lodge. About 100 Swan incandescent lamps have been fitted up altogether, and of these 70 can be worked at once, and all or any can be turned on or off at pleasure. Most of the lights are of about 16-candle power, but a few are 32. About 80 lights are distributed through the house, lighting every portion, no other kind of light being provided for. Seven lights are taken up in lighting the stables, and twelve outside. These latter are all controlled by one switch near the hall door, and can either be lighted or extinguished instantly.

The effect of the instantaneous lighting up of the drive on a dark night is novel and pleasing. The distance of the turbine and dynamo from the house is about 350 yards, and from the house to the lodge about 400 yards, so that a circuit approaching a mile in extent has to be traversed by the electric current which goes to the farthest lamp. Very little attendance is required by the dynamo-machine or turbine, all that is necessary being to turn on the sluice valve admitting the water to the turbine when the lights are required, and it is only necessary for a man to inspect the machines about once in the evening.

For stopping the turbine at night when the lights are no longer required a simple electrical arrangement has been designed, by means of which the sluice valve can be closed from the house without going down to the turbine house. This is done by merely touching a handle, and so admits of the lights being burned late, and put out at any time without the necessity of keeping anyone in attendance to turn off the water when done with. The steadiness of the lights is absolutely perfect, and there are no products of combustion whatever given off to contaminate the air of the room and spoil the decorations. Mr. Laing is to be congratulated upon being the first in this district to show such a complete adaptation of the electric light for domestic purposes, and the abundance of water power at disposal in the neighbourhood will no doubt induce many others to follow his example.

The whole of the electrical portion of the work was entrusted to and successfully carried out by Messrs. J. Edmundson & Co., electric light engineers, of 19 Great George Street, Westminster, London.

### TECHNICAL EDUCATION IN AMERICA.

**A**N elaborate report on technical and industrial education in the United States and Canada has been prepared for the Royal Commission by Mr. William Mather. The author was occupied from May 23 to November 1 in its preparation, having travelled upwards of ten thousand miles, and made special inquiries in twenty-two cities. Mr. Mather says that there are 164,832 school buildings in the United States, which are valued at 42,282,308*l*. During the year 1880 the total amount expended in the schools was 19,371,525*l*. The primary schools are distinguished for the excellence of the buildings, sanitary arrangements, and class-rooms. The high schools have in most cases a science side as distinguished from the Latin or English side. Many of them are furnished with a chemical laboratory, a physical laboratory, and apparatus varying in quality and ranging in value from 500*l*. to 2,000*l*. Drawing is universally taught in these schools, but is only obligatory on the scholars who have adopted the science side. For those who have had previous training, advanced courses of drawing are conducted, but elementary instruction is also given when necessary. Of cities of populations from 50,000 upwards there are twenty-one in which drawing is compulsory, representing schools with an average daily attendance of 386,200 pupils. Of cities having a population between 10,000 and 50,000, there are fifty-eight having an average daily attendance in the schools, where drawing is compulsory, of 116,000 pupils. The introduction of this industrial drawing into the public schools is rapidly extending.

Descriptions are given by Mr. Mather of the system adopted in the principal technical schools. The teaching in Columbia College, New York, comprises mining, engineering, metallurgy, civil engineering, geology, analytical and applied chemistry and architecture, and in all the departments practice is combined with theory. The vacations are utilised as far as possible by actual employment in works. Everything appears to be done to keep the college abreast with modern requirements. The idea held by the President is that "the present studies must be continually improved upon and kept fully up to the spirit of the age as it advances; furthermore, new studies and branches of learning must be undertaken, and new professors appointed. We must not let the grass grow under our feet;" and his words augur a greater interest in technical education throughout the States.

In the Columbia College the students are required to be seventeen years old, and to pass a stiff examination before they are eligible for admission. The Cooper Institute in New York, on the other hand, is a technical night school for both sexes, and is free to all students. The building and appliances have cost 120,000*l*., and the total expenditure has been 320,000*l*. An endowment of 60,000*l*. by Mr. Cooper, in addition, clears the Institution of its ordinary expenditure. The children of Mr. Cooper have offered 20,000*l*. as a further contribution for the use of the trustees. The number of pupils in 1882 was 3,917. Of these, 1,169 entered the evening scientific classes; 1,797 the evening art classes: 496 pupils were admitted to the women's art day-schools (about the same number were declined for want of room). The plan of admission is "first come, first served," of any colour, clime, creed, or no creed. The object sought after in the art department is to make the studies practical and useful in the industrial arts.

From all sources, including painting and decorating china, and designing, the students of the Institute collectively earned 8,000*l*. last year for industrial work, executed in the classes, at the same time that they were receiving instruction in the principles of science and art. The trustees have the intention of extending more and more the department of design and construction, in order to strengthen the inventive faculty which Americans possess in a high degree, and which, guided by an intimate acquaintance with scientific principles, will become increasingly productive among the working classes.

No less remarkable is the new Working Man's School in New York, which is really a school for educating children to become intelligent and dexterous working men and women. The salient feature of the experiment is that it introduces what may be called the creative method into school education. The idea is to give lessons by the production of objects. "Industrial education," as conducted in this school, is to make the education of the hand instrumental in more rapidly, and yet with less mental strain, educating the brain. At eight years of age the children are led to become familiar with every geometrical form and figure by actually forming it in clay and paper. In advanced courses the same objects are formed in wood. Objects from nature are placed before the pupils, and, to emphasise the oral instruction, the pupils are required to reproduce the object by the work of the hands. Drawing first the object, the pupil is led to form it from the drawing. For instance, in forming a triangle or a cone the pupil makes a drawing from the figure. He then goes into the workshop with his drawing, and with clay, or paper, or wood, by the use of suitable tools, actually creates the object. Much of the apparatus used in the higher classes is made by the pupils. In all the courses, such as reading, writing, arithmetic, geography, &c., an objective method is adopted. There is scarcely a subject in the study of which the pupil has not to employ his hands. Drawing is the basis, and actual construction the vehicle, of all the knowledge imparted by the teachers.

The Stevens Institute of Technology, near New York, was founded with the object of giving a thorough technical and scientific training in mechanical engineering, and Mr. Mather says he has never seen its superior. Theory and practice are never separated during the four years' course, but there is no attempt to teach the trade of a mechanic, although manual exercises from pattern-making up to the completion of a piece of finished work in the various metals are daily carried out. The Rensselaer Polytechnic Institute, at Troy, is another engineering school which has won the highest reputation. Its graduates have taken part in the most important and original engineering works in America.

It would not be practicable for us to find space to notice the remaining technical schools which are described in Mr. Mather's report. But it is remarkable that, while so much is done in the United States to promote education in mechanical engineering and the allied branches, the schools of art, either for the industrial or fine arts, are not numerous in America, nor is there much to show of industrial value from those already established. It is probable that the further introduction of drawing into all the public schools, with special and properly-trained teachers, will cultivate a desire for higher instruction in art and design, in which case there is no reason to doubt that the necessary institutions will be supplied. The schools that more closely affect the local industries at the present time are the Maryland Institute of Baltimore and the Cooper Institute of New York. As schools devoted exclusively to art and design there is one in Philadelphia, the Philadelphia School of Design for Women; in Boston, the Normal Art School of Massachusetts, and a fine art school connected with the Gallery of Fine Arts and Museum; in New York there is also an art school of a similar character; and in most of the large towns there are small schools for drawing and designing. In San Francisco there is an important school doing very good work, but confined chiefly to the wealthier classes.

The conclusion drawn by Mr. Mather from his investigations is that the establishment of technological schools in the centres of mechanical industry in England is most necessary, and that we should follow the example of the United States without delay. Further, we may take a warning from America. Our national system of elementary education must not drift to the literary side alone to the degree that it has done of late in that country. The



storing of the memory with a multitude of extracts from books, which for a brief period after the school life may be retained and repeated as a proof of education, is altogether misleading for boys or girls who must face the stern realities of making their own living. The character of the teaching in America has recently been tending towards a distaste for manual work, but a movement is gaining strength to change the course of instruction in the public schools, in the direction of devoting a large portion of the school time to subjects of a practical nature, promoting tastes for industrial occupations based upon a knowledge of the natural sciences.

### WORKMEN'S HOUSES.

A PAPER on "Sanitary Houses for the Working Classes in Urban Districts" was read by Mr. H. Percy Boulnois, borough engineer for Portsmouth, at the Health Exhibition Conference on Tuesday. The author attributed the defects in existing houses to three causes, viz. :—(1) The avarice of the builder. So long as he can sell or let cheap houses, built with hidden defects, so long will they continue to be erected. (2) The ignorance both of builders and tenants. If the latter were educated in the simplest rudiments of structural sanitation at the Board schools, and in other manners, the former would soon learn that their ignorance or cupidity did not pay, and they would very speedily find out the remedy. (3) The want of sufficient supervision by the officers of the sanitary authority. This arises in no way from the fault of the officers themselves, but from the insufficiency of the staff employed. A change was certainly required in the present machinery and manner of the inspection of buildings in course of erection, and until a large staff of inspectors or sanitary police, or some such officials, were employed, very little real advancement would be made with the sanitation of buildings. To secure this adequate supervision a fee might be charged by the sanitary authority to the builder or owner, and although any provision which might increase the cost of construction of the house was undesirable, the extra cost of such inspection would be too small to be appreciable, while the advantages would be not only considerable to the community, as tending to improve the public health, but also to the owner of the house, as insuring good honest work for his money. In larger and more expensive buildings this supervision was generally exercised by the architect, but as a rule no architect was employed to supervise the erection of small houses, though in many cases one might have prepared the plans, and the builder was accordingly left almost entirely to his own devices, with frequently unfortunate results.

Professor Acland said that a great deal of knowledge on sanitary subjects had been diffused in this country, and the difficulty now was to get that done which we knew required to be done. With respect to domestic sanitation, no compulsory laws would ever bring about what was wanted. They must look to the spread of knowledge among the people. It had been treated as a joke that at the Health Exhibition educational apparatus was shown; but it was by education, and not by compulsion, that sanitary reformers would effect what they desired. There were also, of course, works which could only be carried out by the community, and for the satisfactory accomplishment of these they must look to the improving education of our legislators. Economy was essential in this matter of sanitary improvement. While they saw the loss caused by disease and the want of material comforts, they were bound, he thought, not to endeavour to force upon the people anything which was not absolutely necessary. In the exhibition might be learnt not only what was necessary, but how little it was very often that was sufficient to make a house a decent and safe habitation and to keep it as it should be kept, without imposing upon the owners or occupiers costly things which were difficult to obtain and complicated things which were difficult to maintain.

Sir Robert Rawlinson, agreeing most heartily with the last speaker that sanitary progress must be a matter not of State compulsion, but of education, commented upon the enormous and unnecessary expense frequently imposed upon the ratepayers in the execution of drainage and other works by local boards.

Captain Douglas Galton, the chairman, said that blocks of dwellings let in flats, if properly constructed, need not be unhealthy, and that provisions for warming—by steam, for instance, as was done in New York—and for efficient ventilation might be economically introduced in such buildings. With regard to separate houses in rural districts, cottages for the farm labourer were as much an appendage of the farm as the stables for horses, while in towns he thought it very desirable that our manufacturers should adopt some such arrangements as were in operation at Mulhouse and elsewhere on the Continent, where the workman was, so to speak, made an integral part of the works, had a good house built for him by his employer, and got a share of the year's profits. This would give us contented workmen, and diminish very greatly the difficulties of this sanitary problem. He believed that more powers might be advantageously given to the sanitary authorities, but he was certain that if sanitary authorities would exercise the powers they now possess to the fullest extent, and in an intelligent manner, we should have very few insanitary houses in England.

He thought there were many cases where, the demolition of houses unsuitable for habitation being required, the rates should be charged with the erection of dwellings, but in that matter they must proceed with great circumspection. We could not hope to remedy evils which had arisen in the course of centuries in a few years, but it was a most hopeful sign of improvement that the people were now greatly alive to this important question. It was by education alone that they could grapple with it.



### Darlington Free Library.

SIR,—In a paragraph notice in your issue of the 7th inst., of the laying of the corner-stone by Sir Joseph Pease, you state the building is estimated to cost about 5,000*l*. This is an error, as the present contracts, exclusive of furniture, lighting, palisading, &c., already amount to over 6,000*l*. As a matter of fact, the estimated cost is above 7,000*l*., and this, I may mention, is exclusive of the site, which has been given by the Messrs. Pease.

Yours faithfully,

June 9, 1884.

G. G. HOSKINS.

### Board School Competition at Darlington.

SIR,—I was exceedingly surprised to read such an *ex parte* statement, *re* the late competition for new Board schools at Darlington, as appeared in your issue of Saturday last. It is only fair to yourself and just to me that the imperfect, and consequently misleading, statements supplied to you by some writer should be supplemented by a few plain statements of facts. These I beg to give you and ask you to insert them in your next issue. The false and base insinuation of this writer respecting my father, and, inferentially, his censure upon the deliberate action of a body of gentlemen comprising eight-elevenths of the School Board of Darlington, I will leave to these gentlemen to deal with if they think necessary.

All the designs received the careful consideration of the Board, and, after fully considering the merits of each, two designs were chosen for the final decision of the Board.

At the monthly meeting, held on the 29th ult., these two designs came up to receive the judgment of the Board, all the members being present. Eight members voted for my design under the motto "Hope," whilst only three voted for the design sent in under motto "Three R's." The chairman and vice-chairman—who were perhaps more qualified to judge of the respective merits of the designs than any other members of the Board—both voted for my design, and any fair-minded person will be convinced that fair play was done and no favouritism shown when it is known that four Churchmen, two Roman Catholics, and two Wesleyans voted for my design.

My drawings were adopted by the Board on account of the excellent arrangement of my plan combined with a design, to say the least, not inferior to any other submitted in competition, and at a less cost.

I feel it is a great honour that my design has been adopted by the Board; but the honour to me is infinitely greater when I know that the members of the Darlington School Board who voted for my plans are above the suspicion of favouritism, that they have ability to judge as to the real merits of plans, and that they have conscientious convictions of duty, which they were only carrying out when they adopted my design.

Yours truly,

FRED. W. BROOKS.

### CHURCH BUILDING AND RESTORATION.

**Hoylelake.**—The foundation-stone of the new Congregational church was laid on the 6th inst. The site is at the corner of Station Road and West Kirby Road, and contains 2,500 square yards. It is contemplated, having regard to the increasing population of Hoylelake, that a much larger building may at some future date be erected on the part of the site where the temporary church at present stands, in which case the building about to be put up would be used as a lecture-hall and class-rooms. The present building, which will be constructed of brick and slate, will, according to the plans, be 65 feet long and 30 feet wide. The roof will be a high-pitched span, supported on arched principals of laminated timber. On one side of the church there will be an organ-chamber, 13 feet square, and on the other a vestry, &c., while to the rear there will be a room, 48 feet by 18 feet, to be subdivided and used for Sunday-school purposes. This room will at pleasure be connected with the church by means of an opening 18 feet wide, provided with shutters and curtains. The seats will be open benches, and the entire woodwork will be varnished without stain. The contractors for the whole of the work are Messrs. Smith, of



Hoyle; and Messrs. W. & J. Hay, of Liverpool, are the architects, under whose supervision the work will be carried out.

**West Monkton.**—The handsome parish church of West Monkton, dedicated to St. Augustine, which has recently undergone a thorough restoration, has been reopened. The building consists of nave, north and south aisles, with clerestory, porch and chancel, and is one of the best specimens of the churches of the Somerset type of architecture. The work has been carried out from the designs and under the direction of the architect, Mr. George C. Strawbridge, of Taunton, by Mr. J. Blackmore, builder, Hatch Beauchamp. The total cost of the restoration has been 1,000*l*.

### NEW BUILDINGS.

**Bloxwich.**—The new public buildings at Bloxwich, the outlying part of the borough of Walsall, have been opened. The buildings are in the Queen Anne style, and comprise a free library and reading-room, a police station, and accommodation for the sanitary work of that part of the borough. The block is so arranged that extensions may be carried out as may be necessary. The architect is Mr. F. E. F. Bailey, Walsall, and the builder Mr. D. Evans, Dunstall Hill Lane, Wolverhampton. The entire cost will be about 2,400*l*.

**West-End Co-operative Shoe Works, Leicester.**—The formal opening of the extension of these works took place on Saturday afternoon. It now forms one of the most extensive shoe factories in Leicester. The building occupies a triangular site with a frontage of about 190 feet to Dun's Lane, and about 200 feet to the river Soar. The main block consists of five large flats, each containing about 8,600 square feet, all well lighted from the frontages, and also from a central yard or area. A lower (three storey) building occupies the south-western portion of the site. The counting-house entrance occupies the centre of the Dun's Lane frontage, and on either hand is a larger entrance, one for the delivery, and the other for the despatch of goods, each of these entrances being provided with a powerful hoist communicating with the floors above. The ground floor contains the heavy machinery and the rivetters' shops, the engine-house and boiler. The first floor is occupied by the counting-house, the taking-in room, and the stock-packing and sample rooms. The second floor is appropriated to the nursery department or young children's shoe factory. The third floor contains the sewing machines and fitting room; and the fourth or top floor the clicking or cutting-out department. Airy and cheerful mess-rooms for men and women are provided. The architecture of the building is of Classic character. The materials for the principal fronts are red pressed brick, with ornamental dressings of Coalville and Reading brick, Coalville terra-cotta, and Derbyshire stone. The principal front is that towards Dun's Lane, the length being 190 feet, and the height of the main block 60 feet from the street level to the top of the parapet. The central block is crowned with a bold frieze and pediment, the tympanum being enriched with arabesque ornament in carved brick, and the attic storey above ornamented with urns on either flank, and with an ornamental feature in the centre bearing in a panel "the wheat-sheaf," the emblem of the society, carved in high relief. The building is heated throughout by steam on the high-pressure system. Thorough ventilation is provided, fresh air being admitted by means of numerous upright shafts, and the foul air being extracted by flues carried up above the roof, and fitted with patent extraction ventilators. The contractors for the works are as follows:—Builder's work, Mr. J. O. Jewsbury; carpenter and joiner's work, Mr. J. Cox; ironfounder's work, Messrs. Illston & Arnold; plumber, glazier, and painter's work, Messrs. Norman & Underwood; the mason's work has been executed by Mr. A. Westman, and the carving in brick and stone by Mr. S. Wilmot. The heating is by Mr. Thompson, of Rawdon, and the hoist work by Messrs. Waygood & Co., of London. The architect is Mr. J. Tait.

**Walsall.**—New schools at Palfrey, belonging to the School Board, have been opened. The block provides accommodation for 865 children—viz., 330 boys, 250 girls, and 285 infants. This makes the eighth set of schools in the borough belonging to the Board, raising the total accommodation in the Board schools to 5,647. The total cost is estimated at 4,850*l*.—viz., the erection of the building, 3,599*l*; furnishing, 350*l*; architects' commission, 200*l*; extras, 150*l*; and land, 551*l*. The architect was Mr. Loxton, and the builder Mr. Whistance.

### GENERAL.

**The Dean of Windsor** has been appointed a trustee of the British Museum, in place of the late Duke of Albany.

**The Duke of Norfolk** has subscribed 3,000*l*. towards the support of the technical department of the Firth College, Sheffield.

**A Committee** has been formed for the restoration of Worms Cathedral, a building which has already been debased by the experiments of restorers.

**Mr. Richard Sangster**, architect, of Cornhill Chambers, died on Monday last, in his thirty-fifth year.

**The Plans of Mr. J. E. Burton**, of Ashton-under-Lyne, have been selected in competition for the erection of a new Wesleyan chapel at Berry Brow, Huddersfield.

**The Chapter of Lichfield** have decided to reserve a niche in the cathedral west front for a figure of Dean Bickersteth.

**An Archaeological Society** is proposed to be formed for Walsall and the immediate neighbourhood.

**The Scheme** for enlarging the chapel of Marlborough College, for which a contract at about 10,000*l*. was recently entered into, has, it is stated, been abandoned. It is now intended to pull down the chapel entirely, and build a new one in its stead.

**The Albert Medal of the Society of Arts**, instituted in 1862 as a memorial of the late Prince Consort, and given annually "for distinguished merit in promoting art, manufactures, or commerce," has been awarded by the council of the society, with the approval of the Prince of Wales, the president, to Captain James Buchanan Eads, "the distinguished American engineer, whose works have been of such great service in improving the water communications of North America, and have thereby rendered valuable aid to the commerce of the world."

**The Carpenters' Company** have given 100 guineas to the International Health Exhibition; 500*l*. to the Equipment Fund of the City and Guilds Technical College, Kensington; 25*l*. to the City of London College; and 25*l*. to the Female School of Art.

**The City and Guilds of London Institute** is to receive the following contributions from the City Companies:—Fishmongers, 4,000*l*.; Mercers, 2,000*l*.; Clothworkers, 2,000*l*.; Corporation of London, 1,000*l*.; Skinners, 1,000*l*.; and an increased subscription of 500*l*. annually; Leathersellers, 500*l*.; Carpenters, 500*l*.; Armourers and Braziers, 300*l*.; Tallow Chandlers, 105*l*.; Scriveners, 105*l*.; Stationers, 52*l*. 10*s*. annually; Clockmakers, 26*l*. 5*s*.

**The East Window of Easbury Church**, Lamborne, Berkshire, has had a stained glass window, to the memory of the vicar's wife, placed in it by her husband, the Rev. G. F. Forbes. It is a five-light window in decorated style. The subject chosen is the Ascension of our Lord. The work has been carried out as regards the painting and colouring by the firm of Messrs. Ward & Hughes, of Frith Street, Soho, London, who lately executed the side window in the same church.

**The Memorial** to commemorate the celebration of the septcentenary of the mayoralty of the city of Winchester will be erected from the designs by Mr. J. B. Colson, of Winchester, submitted in competition with those by Mr. C. R. Pink, of Winchester and London. The cost will be about 350*l*.

**The Bishop of Kingston, Canada**, who sailed from Liverpool this week, per the ss. *Parisian*, has taken out forty-eight lancet windows of stained-glass for erection in Kingston Cathedral. These are the first of a series, and contain subjects from the lives of our Lord and His Apostles. They have been designed and executed by Messrs. Wailes & Strang, of Stained Glass Works, Newcastle-on-Tyne.

**The Oxford Local Board** have accepted a tender for the erection of an infectious diseases hospital from the plans of Mr. W. H. White, M. Inst. C.E., their surveyor. There will be two detached pavilions, each providing for twelve beds, a special ward pavilion for two beds, an administrative block, laundry, ambulance house, mortuary, and disinfecting house. The buildings and grounds will be enclosed by a wall 7 feet in height. The site, five acres in extent, adjoins the road from Oxford to Abingdon, about a mile from Oxford.

**Messrs. Charles Bussell, Gibbs & Co.** have manufactured the stained glass windows for the Great Indian Peninsular Railway administrative block, Bombay terminus, from designs furnished by them. Special monograms, together with the arms of the company, have been worked into the windows. The colour is rich and deep. The windows may be seen at their workshops, Nos. 75 and 76 Wells Street, Oxford Street, during the following week.

**Messrs. C. B. Pare & Co.**, of 126 London Wall, E.C., have been appointed official agents to represent British exhibitors and facilitate the transport of their exhibits to the Antwerp International Exhibition of 1885.

**Ventilation.**—Messrs. Robert Boyle & Son, of 64 Holborn Viaduct, have received an extensive order from the Russian Government for their large-size Patent Self-Acting Air Pump Ventilators, to be applied for the ventilation of the Imperial Manufactory of State Paper, St. Petersburg. This order is the result of the success of the air-pump ventilators applied to the Imperial Mint and Imperial Bank Note Manufactory, St. Petersburg, which are pronounced by the Government officials to be the only ventilators tried which have fully answered their purpose, and effectually kept out the snow in the winter.

**Messrs. Isler & Co.** have completed a 100-feet bored well, 6 inches in diameter, besides fixing and lining pipe, in a fortnight, at East Berkshire Brewery, Maidenhead. An ample supply of water was tapped.



# SUPPLEMENT

TO THE

# ARCHITECT.

LONDON, JUNE 14, 1884.

## THE INTERNATIONAL HEALTH EXHIBITION.



ALTHOUGH each week necessarily adds to the completeness of the exhibition, it is nevertheless a fact that it is not yet in perfect order. Even the Old London Street is not complete. Some of the exhibits first commenced still lack their finishing touches, while carpenters may be seen here and there engaged in the erection of new stands. It would be only waste of time to inquire into the reasons of this state of backwardness, but it is none the less annoying, and oftentimes disappointing. We never remember an exhibition in which so many exhibits are left without attendants, and we are confident that it is a mistaken economy, and that the firms who so neglect their goods are every day losing opportunities of doing business.

*Messrs. Griffiths, Berdoo & Co.*

At 873 are located the SANITARY PAINT CO. (Messrs. GRIFFITHS, BERDOO & CO.), South John Street, Liverpool. As at the annual building exhibition, held at Islington, so here, their handsome and effective stand forms a very prominent feature, and is in fact the most interesting in its class, not merely from its artistic character, but on account of the intrinsic merits of the articles exhibited. Year by year the deadly effects on the health of the operatives employed in the manufacture of white lead are brought more prominently before us, so that it is gratifying to know that the pigment manufactured by this firm, and known as Griffiths's patent white, will not only take the place of ordinary white lead paint, but in addition offers advantages that white lead lacks, it being claimed for it, and we believe has been proved in practice, that it is more economical than lead paint, for the same quantity will cover a greater surface, and it works more freely under the brush, while its durability is unquestioned. Another point worthy of note is the exceeding variety and delicacy of the tints formed from Griffiths's patent white as a basis, the merest glance at the stand being sufficient to convince one that the objection urged against this class of paint, that the bright and rich colours could not be obtained, is entirely without foundation, and even emerald greens can be supplied perfectly innocuous in their composition. Griffiths's patent white is equally advantageous for distempers as for oil paints, and some of the colours and examples of wall decoration here exhibited are all that can be desired, besides their special value from an hygienic point of view, in the pigments being all non-poisonous. We must not conclude our notice of this exhibit without drawing attention to another very admirable product of the firm, in the shape of a non-poisonous petrifying liquid for coating walls, to prevent the penetration of moisture, and for preserving bricks, stone, and such like building materials from the deleterious effects of the atmospheres of our large towns and cities. The specimens shown of varnishes, wood staining oils, &c., are also well worth attention, and complete this useful and interesting display.

*Messrs. William Woollams & Co.*

In the eastern gallery, at No. 860, we find Messrs. WOOLLAMS & CO., of High Street, Marylebone, who fully maintain their reputation as the original manufacturers of innocuous paper-hangings. To describe the many patterns they have brought here for our inspection would occupy far more space than we have at our command. We can only select the most salient features for our remarks. A striking pattern is the "Tree," depicting foliage, flowers, and birds, on a bright green ground, especially introduced as an example of brilliant colour free from arsenic. Not far from this we find specimens of the original green papers, non-poisonous,

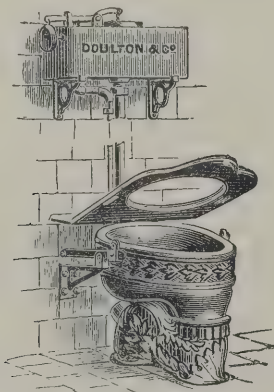
made by the firm in the year 1859, when the agitation against the use of arsenic in wall decorations had attention first drawn to it. These colours maintain their fresh and bright appearance, notwithstanding that a quarter of a century has elapsed since they were made; their freedom from arsenic being certified by Dr. Henry Medlock, a popular analyst at that time. Raised flocks painted over are a speciality with the firm, and patent embossed flocks, washable and highly decorative in character, are both shown in various patterns, evincing great taste in the designs. Blues and old-gold colours are conspicuous, and there is a rich pattern representing Italian brocade of varied colouring, named the "Venezia," composed of no less than thirty-eight different tints, some opaque, others semi-transparent; but although only the number of tints named are really visible, it is said this example of wall decoration contains no less than ninety-four different printings. A green silk damask is no less commendable, and a dado called the "Cavendish," the frieze consisting of *amorini*, holding branches of myrtle, dancing amongst flowers, is a good conception. Next we have a chintz pattern of thirty-six colours on a blue mica ground, and then follows a dado of Jacobean character, called the "Lyre Bird," designed by Mr. Owen W. Davis, an exquisite production. Another of the brocaded type, from the pencil of Mr. Arthur Silver, named the "Chelsey," will probably find many admirers. One fine Italian pattern, called the "Tapestry," is printed in semi-transparent shades of reds, purples, and greens on a diapered mica ground, and deserves high commendation. Although we have only mentioned the high-class designs, the firm are equally to be commended for their inexpensive qualities of wall-papers, and they exhibit in addition the non-arsenical colours used by them in their business. Designs for wall-papers by well-known artists are also to be seen amongst their exhibits, which is one the jurors cannot well pass over without some tangible acknowledgment.

*Messrs. Doulton & Co.*

At the eastern end of the central gallery will be found the comprehensive exhibits of Messrs. DOULTON & CO., the decorative features of which will not readily be forgotten. Long before the exhibition opened, the costly work which it was seen the firm were building up was the theme of conversation amongst those whose business led them into the exhibition grounds. A large space has been allotted them, and they are entitled to a meed of praise for the architectural designs of the different erections, independent of the art features of which they are mainly composed. The principal object is a pavilion, square in form, from which rises a central dome, and the only drawback to its appearance is the low pitch of the roof of the gallery, the dome reaching to within a few inches of the top. This pavilion is entered by an archway on each of the four sides, and the materials employed in the erection of this work of art is either the pottery now universally known as Doulton ware, or tiles hand-painted by the artists of the firm, and others in relief. When we remember the few years that have elapsed since the Messrs. Doulton introduced this beautiful ware, that is now known throughout the civilised world, and is made into almost every article for domestic use to which pottery can be applied, and broadly speaking, from a salt-cellar to a pillar for architectural purposes, scarcely any two productions being exactly alike, we can but admire the enterprise of the firm, while according them the merit of a new introduction which will hand their names down to posterity as amongst the most honoured in the pottery art. In erecting this work of art expense has been altogether ignored, and we doubt if its exact cost is known to the firm themselves. No description can give a fully appreciative account of its many salient attributes, and any time expended by the visitor in examining its details will be well spent. Each of the four sides composing the structure are embellished with panels



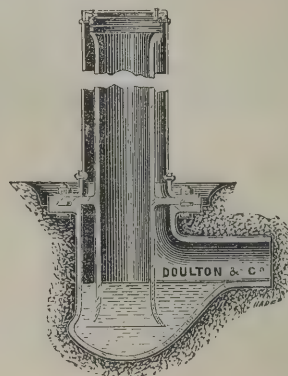
of hand-painted tiles representing various interesting subjects and persons. Commencing with the north side, we find four views of old and modern Lambeth, a graceful recognition to the district in which the development of the firm's industry has been carried out. There is Lambeth Palace, replete with historical associations; High Street, with some of the quaint buildings still remaining, with the turrets of Messrs. Doulton's new buildings visible in the distance; Bishop's Walk, of which the site was swept away during the erection of St. Thomas's Hospital; and the Albert Embankment, with a full view of the noble building erected by the firm during the past few years. On the west side we have illustrations of pottery processes, including throwing and handling, turning or lathing, tile-making, and drawing the kiln. Those on the front or south side, facing the promenade, are of more elaborate character, and represent "Science" in the person of an aged man, with a large volume on chemistry, and a pupil holding up a flask of fluid to the light, while several chemical vessels are ranged around. "Western Art" shows a modeller of the school of Della Robbia, and a painter engaged upon a vase of the famous Urbino ware. "Eastern Art" is a pretty picture, and introduces us to a man "throwing" on a primitive wheel, the "posture" of the worker being in accordance with Eastern habits—a woman being engaged in painting them. The background is very picturesque, showing an Indian lattice made of glazed earthenware. The last on this side delineates "Commerce," in the person of a Dutchman offering his pottery to an English merchant, the background being an old wharf probably on the Scheldt. The east side introduces us to full-length portraits of four celebrated potters, representing France, Italy, Japan, and England. Palissy is painted in an attitude of despondency and disgust at the loss through the failure of his kiln of two choice *morceaux*. Della Robbia is engaged in fixing one of his famous architectural reliefs in an arch of the Virgin and Child. Shon-Sui, a Japanese potter, is pictured on the next panel. He is supposed to have established the production of fine porcelain in Hizen, an art he learned from the Chinese. The last panel depicts our own Wedgwood examining one of his reproductions of the Barberini or Portland Vase, which contributed so much to his fame. He who is inclined to moralise may raise in his imagination some future Layard or Schliemann in generations to come, bringing to light portions of this temple of the Victorian period, and indulging in speculations as to its origin, and the "lost art" of this celebrated manufacture. The domed ceiling is partly covered with tiles of floral decoration conventionally treated, and the four corners of the building are fitted as furnished apartments, consisting of a boudoir, library, drawing-room, and dining-room. In each of these the fireplaces and mantelpieces are composed wholly or in part of Doulton ware, the combination of wood and pottery being conceived with happy effect. Outside the pavilion and in each corner are four annexes, also supported by columns of Doulton ware, and in these are massed a collection of the firm's principal manufactures, consisting of sanitary productions, drain pipes, stoves and grates, and filters. Referring to individual exhibits in these sections, there are several new articles to be commended. The Lambeth patent "combination" closet, with which the retiring-rooms at the exhibition are supplied is one of these. It is well named, as it combines closet, urinal, and slop sink in one. An illustration of this is appended. It is made of Doulton ware, though of a less expensive character than most of the "art" ware, and is not encased with woodwork, so that all its



surroundings can be easily kept clean. The seat is hinged, and when lifted forms the slop sink, or urinal, the pan being made of the lip shape for the last-named use. The flush of water is given by the action of the seat, in connection with the firm's patent automatic flush tank and syphon, which secures a powerful discharge and retains a volume of water  $1\frac{3}{4}$  inches in depth after every flush. A new instantaneous water-heater for baths, lavatories, &c., is also shown, and the arrangements of this appliance are different from any others that we are acquainted with for a similar purpose. In outer appearance it does not differ from most others, the difference in construction resting with the interior. Its advantages consist in the gas not coming in contact

with the water, and in the absence of any coils of small piping liable to "furr" or become clogged, and a warm bath of thirty gallons may be secured by its use in less time than is usually taken with similar appliances, and being made entirely of copper rust or other corrosions cannot occur. A very cheap and neat-looking cottage pump forms another of the articles shown here for the first time. It is made of iron, galvanised or painted, and the cylinder of strong stoneware, giving it a clean and attractive look. By means of an inner lining precaution has been taken as much as possible to guard against frost "fixing" it. This pump can be sold at a most trifling price, and for a certain class of property is bound to command a large sale.

The next illustration is that of the patent automatic flush tank and syphon made by the firm in various sizes, either for water-closets, urinals, or for flushing drains and sewers. As the drawing clearly defines the action, further remarks are unnecessary,



excepting to say that of all modes of flushing the syphon action offers the easiest and most reliable, and effects the purpose far more effectually, and with a much smaller consumption of water. Water filters are shown in a variety of forms and sizes, from the small pocket syphon, for tourist or army use, to the self-cleansing high pressure, for the use of brewers, mineral water manufacturers, and other large establishments. The designs in household filters in Doulton ware are of the usual attractive appearance incident to that material, and the media generally employed for filtration is a manganous carbon. Our last illustration, though the smallest, is by no means as regards its value the least, and represents a small filter to be attached to the tap of the main supply of the house. This is a handy little appliance, and, as the filtering media can at any



time be easily removed for cleansing or a fresh supply, it offers an amount of security at a very trifling cost. In whatever form they work clay Messrs. Doulton appear to be perfect masters of the material. Thus, an example of a Late Pointed window-head of terra-cotta is perhaps as fine a specimen of work from clay treated in this manner as has ever been manufactured, and a red-and-buff terra-cotta dado for ecclesiastical use is equally worthy of commendation. A new invention of considerable merit, and likely to prove a great acquisition, is shown in the form of a silicon tread for stone staircases or steps. It is laid down on the face of a few steps leading to Messrs. Doulton's exhibit from the upper part of the gallery. The treads are made of a specially prepared clay, with small corrugations, and appear as hard as adamant. In the terra-cotta steps made by the firm, arrangements are carried out for fixing the silicon treads to them, but they can be easily adapted to any stone steps, and may be looked upon as practically indestructible. It now only remains to speak of the ladies' and gentlemen's retiring-rooms, which have been fitted up by the firm with great taste, amounting almost to elaboration, and with the utmost care as regards sanitary requirements. The cabinet-work of the lavatories was designed by their own artists, and, with an admixture of Lambeth faience, have resulted in some charming effects. The closets are all of the type illustrated above, flushed by the automatic syphon before named. The "individual" urinals are similarly treated, and flushed at periodic intervals; and there is a range of urinals, the trough being of fine stoneware, always full of water, and flushed in a similar manner. The drainage outside is open to the inspection of everyone, and the trench, instead of being filled up, has been mainly covered with tiles at sides and bottom, and a perforated cast-iron grating placed over the top. The drains are also ventilated by means of Cregun's fresh-air inlet. These arrangements enable access to be obtained at any moment by merely lifting off the cast-iron grating, when the slightest fault can be immediately detected. It would tend much to the safety of our homes if the laying of the drains in all houses were carried out upon a similar system.

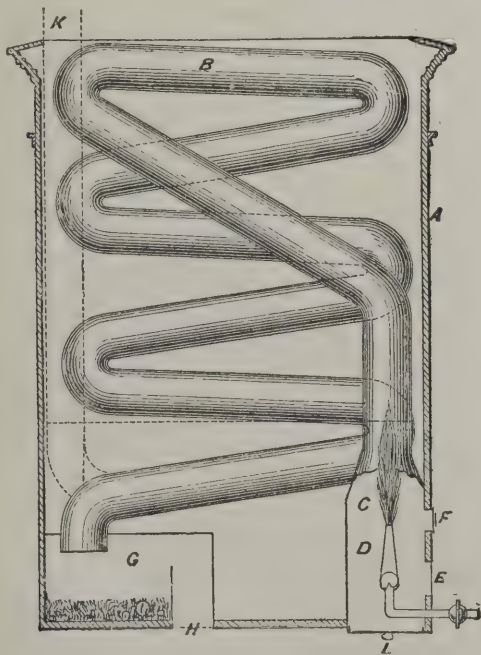


*Messrs. Smith & Turner.*

At 395 Messrs. SMITH & TURNER, Bartholomew Close, exhibit a varied collection of door-springs, spring hinges, ball-door porters or holders, and kindred appliances. It is now something like fifty years since the adjustable regulating door-spring, known as Ben. Turner's patent, first saw the light, and during that period they have been extensively used, and still hold their own, notwithstanding that many others claiming to possess the same advantages have since appeared. To comment upon the advantages of an article so widely known and so commonly used as this now is would be a superfluity, but the details of Messrs. Smith & Turner's improved adjustable slam-spring may not be uninteresting. The salient feature in this is that it can be adjusted to any tension, so that when the door falls to, it prevents noise and holds it firmly when closed. A defect in ordinary slam-springs is that they allow the door to stand a few inches open, or else send it to with a bang. This is obviated in the one before us by the introduction of an adjustable screw, which can be tightened or loosened at will. An improved patent water-bar for French casements also has advantages that are worth inspection.

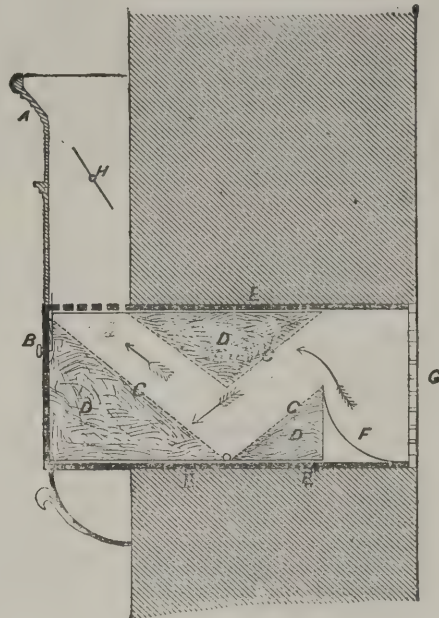
*Messrs. Robert Boyle & Son.*

In the western gallery, amongst the machinery in motion, at Stand 1,126, are Messrs. BOYLE & SON, of Holborn Viaduct and Glasgow. We regret that the committee were not enabled to accord Messrs. Boyle a larger amount of space. In walking through the buildings we found many things that could well have been dispensed with, and the exhibition would have benefited by the space in question being allotted to other applicants whose wares were more in accordance with the objects of the undertaking, or in extending that of firms of position such as the one we are now speaking of, who would not only have made good use of it, but would have introduced a collection of their specialities worthy of the exhibition. With the small amount at their disposal they have done the best possible. The patent, self-acting, air-pump ventilator, that has fought so many battles and gained such successive victories for the firm, seems ready to enter the lists again, and appears as confident of success. We must remind our readers that Messrs. Boyle made another important reduction in the price of these ventilators in October last, which enables them now to be used on the cheapest class of buildings, the prices being now about 40 per cent. less than they originally were. Messrs. Boyle's patent air-warmer and air-cooler are also shown, and are likely to prove as successful appliances as the air-pump ventilator. An inlet tube, in the form of a bracket, which may be made as ornamental as desired, contains a tube of zigzag form, as shown in the accompanying illustration, over and around which the fresh air from the outer atmosphere has to pass before it is admitted into the room. A small atmospheric gas-burner, it will be observed,



is fitted at the lower end of the pipe, which, after traversing it, discharges its products into a condensation box shown at the bottom in the left-hand corner, the pipe being continued upwards into a ventilating shaft or flue. With this simple appliance the temperature of incoming air can be raised to 130 degrees at a cost of less than one farthing per hour. The Reform Club has been successfully treated with these heaters. There is no doubt they effect most favourable results, even when compared with more elaborate and expensive modes of forcing fresh air into rooms. In contradistinction to the air-heater, we have the air-cooler, which is likely to prove as beneficial in crowded and heated apartments in

summer as the air-heater in winter. The arrangements are somewhat similar; but in place of the coil of tubes we have a draw divided by means of wire-netting, and packed around the side with a non-conducting material. In the chambers formed by the netting block ice is placed, and the air on entering passes through the channel in the direction of the arrows shown in our illustration,



and is admitted into an apartment in the usual manner, a valve regulating the supply. The soil-pipe ventilator that has also proved so valuable for this purpose forms another item in the exhibit, and these are now made as low as 15s. Mr. Boyle also shows his economical system of ventilating workmen's cottages, which we described in our report of the late Building Exhibition at the Agricultural Hall. The rest of the exhibit is mainly composed of modifications of the firm's inlet and outlet ventilators, shop ventilators, &c.

*Messrs. Engert & Rolfe.*

At Stand No. 823 Messrs. ENGERT & ROLFE, Barchester Street E.C., have a compact and well-assorted exhibit of their various specialities in roofing and other felts, damp-proof courses, &c., for the superiority of which they stand unrivalled. They have a model roof showing four different ways of laying the felt, as circumstances may require. One is illustrative of the non-conducting hair felt; another shows the method of lining for ordinary roofs; another the inodorous felt for laying under slates; and, lastly, their extra stout asphalted felt for the outside covering of roofs, gutters, &c. The most salient features of this asphalted felt are that it can be easily applied by an unpractised person, and, from its lightness, considerably less timber is required in the construction of the roof. It is perfectly impervious to wet, a non-conductor of heat, and has been found to stand well in all climates. As a ceiling to iron roofs it is very applicable, counteracting heat, frost, and condensation of moisture.

*Messrs. Hodgkinson & Clarke.*

It is to be regretted that the bulk of the educational appliances have had to be consigned to the top gallery in the Albert Hall, and we have no doubt that a large number of the visitors do not see them at all. On the other hand, it may be fairly assumed that, as it is generally known education forms one of the divisions into which the exhibition is divided, those interested in the question will take care not to miss them, but, nevertheless, the journey to the Albert Hall, notwithstanding the advantages of the "lift," is one that we would have rather seen eliminated from the programme altogether. Large as this gallery is, too, the committee have in some instances been sparing in their allotments as far as space is concerned, and Messrs. HODKINSON & CLARKE have not been enabled to make the display they would have done had more room been placed at their disposal. The exhibits consist of a similar lot of educational appliances such as were shown at the building exhibition at the Agricultural Hall, and which were mentioned by us at that time. We observe, however, one new appliance that the firm has just added to their many useful school fittings, and one that both teacher and pupil should thank them for. The article in question is an improved blackboard, which by a simple arrangement can not only be turned to any angle, but completely round from front to back, enabling side or back sitters to have as full a view of the demonstration as those directly in front. The home educational seat and desk is again exhibited here, a very nicely-finished example in polished mahogany being the "representative"; and we have the many other seats,



desks, &c., including the Kindergarten instructors that the firm have recently introduced. One improvement the firm have introduced into some of their fittings is very noteworthy. Whenever cupboards or shut-up divisions in any article are necessary or an addition to it, in place of a door that sometimes cannot be opened without the removal of the person or papers, &c., Messrs. Hodkinson & Clarke introduce the revolving shutter or blind, which, as they are extensive manufacturers of, they are enabled to do with greater facility than some of their competitors. The portable class-room division, to which we have also alluded, forms another conspicuous item in the collection. Being comparatively a new invention, it is not so widely known as its merits deserve. Here, at all events, it will have the advantage of being seen by all those engaged in teaching at South Kensington, and whoever the judges may be who are deputed to pass their opinions upon the educational appliances, they can scarcely pass the new features on this stand without substantial recognition.

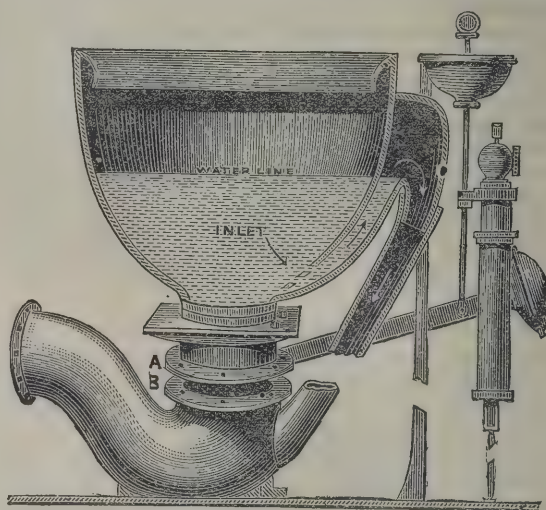
*Messrs. Clark, Bunnett & Co.*

Among the model buildings erected in the grounds, one put up by Messrs. Clark, Bunnett & Co., Rathbone Place, W., calls for special notice. It stands in the space south of the south gallery, and is an example at once of strength combined with lightness and ornament, and shows to what extent iron alone can be, and is, advantageously and economically used for building purposes. The form is rectangular, the shape being defined by ornamental iron columns placed at suitable distances apart, and which support the roof. The front, back, and sides can be open or closed in according to desire, as the firm's patent folding iron, steel, and wood shutters are fitted all round, and, when drawn down, do duty as the walls, thus making the structure most convenient and secure. The roof is composed of corrugated iron laid on iron rafters. Passing to their Stands (Nos. 376 and 874) in the central and east central galleries, we find specimens of the appliances for which Messrs. Clark, Bunnett & Co. are justly noted, such as their dinner and goods' lifts, fitted complete in several sizes, the salient features of which have often been alluded to in the columns of *The Architect*. A portion of a somewhat massive iron staircase shown here is well designed and of a very ornate character, while the spiral and lighter make of iron staircases are up to their usual standard. The specimens shown of their system of constructing solid fireproof floors with a floor-board surface are of great merit. It has been very largely used in the construction of the new St. Pancras workhouse.

*Mr. Henry Conolly and Messrs. W. Phillips & Son.*

In the central gallery at 375, in two commanding bays artistically built and coloured in white and gold intersected with panels of painted and stained glass, are the joint exhibits of Mr. HENRY CONOLLY, Hampstead Road, N.W., and Messrs. W. PHILLIPS & SON, Baker Street, Portman Square, W., the building having been erected and decorated by the last-named firm. A portion of the space devoted to Mr. Conolly's exhibit is apportioned to a bathroom, fitted up in a luxurious manner. The flooring is laid with cork in the style of parquet, which gives a warmth that the ordinary coverings cannot supply. The walls and ceiling are decorated in the Pompeian style, taken from Zahn's examples of decorative remains in Pompeii, in this instance the Casa del Poeta. The work is executed in non-poisonous and washable materials, and is all hand-painted, the execution being of the highest order, and sufficiently good for the most costly furnished drawing-room. The appointments in this room are quite in keeping with the decorative features, the principal one being an elaborately mounted bath of enamelled copper, in a casing of fine cabinet work, composed of walnut, amboyna, and Tuhya wood, and embracing arrangements for shower, douche, needle spray, wave, sitz, &c. The lavatory is of the same wood, the top of Portuguese Fleury marble, a shampooing appliance attached to the basin, and a handsome square, bevelled-edged looking-glass above; the dressing-table *en suite* holds a swing glass, and contains drawers for jewellery, &c.; and the chairs match the other articles of furniture. The gas brackets are of a design in accordance with the decoration. A notable feature in this room is the perfect arrangements for ventilation. The cornice is pierced all round, and conceals here and there a small gas jet, while horizontal and vertical tubes are carried to the outside, or to a main ventilating shaft. Whenever the bath is to be used the gas jets are lighted, which, providing an induced current, drains off the steam and heated atmosphere. The other portion of the bay is devoted to general goods, amongst which is exhibited a bath of similar construction to the one before described, and known as the "Universal." This bath is produced at a price which brings it within the reach of every householder. There are several lavatories of good design, with water fittings of the most approved make; and there is an ingeniously-formed concealed lavatory and urinal, admirably adapted for a gentleman in chambers, library, &c. A choice selection of gaseliers, hall lanterns, &c., are suspended from above, and the wall is decorated with some very pretty mirrors in *repoussé* frames, holding gas brackets, the burners being made to represent coloured wax candles. Several specimens of stained-glass panels, suitable for doors, blinds, &c., are ranged around, and

the ceiling is ingeniously constructed of panels of a similar description, of the most varied subjects, and ranged in angles, which have a charming effect. By the side of this bay, and hid from gaze, is a collection of lavatory ware richly embellished, small drinking fountains, a variety of handsome closets, including Mr. Conolly's last two patents, the "Nestor" and "Safety" valve closets. This drawing illustrates an improvement in the trap of a



closet, which admits of the outlet being placed in such a position to suit the soil-pipe. This object is attained by means of a collar, which is similar in shape to that of an ordinary valve closet; the base of the collar being round is flanged A; this is attached to a corresponding flange B, formed on the end of trap by means of screw bolts, and from the drawing it will be seen that the outlet can be fixed in any position. It is obvious that this system can be adopted in every case where a separate trap is employed. The "Safety" valve water-closet, like the "Nestor" as regards the basin, is made with a cast lead trap above the floor line. The trap is constructed so that the water-line is within  $1\frac{1}{2}$  inch of the seating of the closet; therefore, it will be seen, if there become any defect in the india-rubber seating, the trap still remains sealed. By this means the necessity of a ventilating pipe is dispensed with, also the old system of having a weeping-pipe from the supply to the lead trap fixed in the box of the closet, there being no space for the generation of gases. The overflow arm is also protected from the possibility of soil corroding the edge of pipe, as the clack is made to open against it. There are also exhibited syphon and other water-waste preventers, another speciality of the firm, and a general assortment of plumber's fittings. Amongst these may be mentioned some large and bold cast lead rain-water heads, suitable for public buildings. These are notable for their capacity to receive large bodies of water in the event of heavy storms, and to prevent overflow. In this department an improvement in connection with public urinals, which consists of a half circular sheet of thick glass of the entire size, which is fixed in front of the slate, and insures greater cleanliness. Mr. Conolly's exhibit cannot be approached by any other of its class in the building, and the wall decoration in particular excels anything in the furnished rooms exhibited.

In Messrs. PHILLIPS & SON'S bay the walls are hung with a variety of designs for the decoration of apartments, halls, staircases, &c., which constitutes one of the principal sections of the trade of the firm. A portion of these designs represent works that have been executed, while others are suggestions for different styles of decoration. Although occupying a high position as decorative artists, Messrs. Phillips & Son are no less notable as sanitary engineers and plumbers, and fine specimens of plumbing showing "wiped" joints occupy a place in the exhibit. Of a more comprehensive character are some well-executed models on a rather large scale, showing the complete drainage arrangements necessary for a large suburban house; another of some business premises in Oxford recently completed in their sanitary arrangements by the firm. These models show the entire ground area of the houses, and every pipe, gulley, &c., is shown. That of the business house introduces us to a system of drainage all contained within the premises, and shows how easy it is to provide security against sewer gases in confined places when skill and care are introduced. These models will no doubt receive a great deal of attention, and a little time expended in examining their details will prove instructive to the general householder, as well as to the professional man. As we observed at the commencement of these remarks, the design and decoration of these stands have been carried out by Messrs. Phillips & Son, who have been highly complimented on all hands for the amount of taste displayed.

*Messrs. Broad & Co.*

No. 503 is occupied by Messrs. BROAD & CO., South Wharf, Paddington, who contribute a useful collection of sanitary ware.



Of these their registered improved inspection gully calls for first attention. It is shown in a variety of sizes, and is well adapted for the purpose for which it is intended. Field's channel syphon is another *spécialité*, and judging from its construction, which is sound in principle, should do its work efficiently. An excellent assortment of glazed and enamelled porcelain ware, also shown at this stand, should not be overlooked. It comprises mangers, corner-mangers, butlers' sinks, washing-up tubs, and milk-coolers. Some of the latter are of large size, and as specimens of quality and good workmanship better could not be desired. The well-known glazed bricks of Messrs. Ingham & Sons, of Leeds, are also shown by Messrs. Broad & Co. in their various colours, and tend to render the stand attractive and the exhibit complete.

*Messrs. Jenks & Wood.*

No. 379.—The space allotted to Messrs. JENKS & WOOD, 65 Holborn Viaduct, is in a very advantageous position, and, from the arrangement of their exhibit, it would seem they have not been slow in appreciating it. It is situated immediately on the left-hand side of the entrance to the central gallery, the one devoted to this class, as one approaches it by the avenue passing the Prince of Wales's pavilion and "Bishopsgate." The stand is of white painted wood, and it alone, from a decorative point, is highly creditable. The goods divide themselves into two heads:—Artistic furniture, wall decorations, floor coverings, &c., and furniture and appliances for the sick room, the former occupying two compartments, the latter one. The style followed in the construction of the stand is Queen Anne, and the interior decorations are of the same character, the whole being commendable on account of the purity of design. A mantelpiece and over-mantel in white painted wood, fitted with Venetian mirrors, is an exceptionally choice reproduction of the above style, and, as regards finish and workmanship, all that can be desired. Less cannot be said of a painted cabinet and chairs of fourteenth-century design, notably an arm-chair in white, upholstered with a rich brocade consisting of flowers and foliage gracefully wrought on a grey ground. A piece of modern French reproduction, also of fourteenth century, in the shape of an *escritoire*, is worth notice, and in appearance is equal to what at the late Hamilton sale went for thousands. Specimens of well carved dark oak and walnut chairs, after the Italian, are also shown; and a piece of deep walnut panelling, with Japanese leather above, renders one of the walls very attractive. The object sought in the furniture for a sick room, as also in the room itself, is to dispense with everything of the nature of angles or corners that would harbour dust or dirt, &c.; for instance, the angle formed by the skirting and the floor-boards is filled in, and forms, as it were, a hollow moulding, capable of being perfectly and easily cleansed. The furniture is very simple, all kinds of hangings being discarded, and, while not forgetting the object in view, is by no means of an unattractive character. The firm have supplied it to many of the middle-class or paying hospitals throughout the country.

*Messrs. Tuberville, Smith & Son.*

At Stand 403, Messrs. TUBERVILLE, SMITH & SON, of 9 Great Marlborough Street, W., have an erection that possesses interesting and exceptionally uncommon features. The firm are well known as importers of foreign carpets, matting, and the like; and their stand, which represents a smoking-room in the Oriental style, is replete with such articles, as well as a variety of ottomans, couches, &c., of Eastern manufacture. The front is composed of Cairene woodwork, said to have formed a portion of an old house in Cairo. It is in a good state of preservation, and no doubt possesses considerable attraction for those who can admire the style as well as for the ordinary sightseer. Inside, at one end of the room, is a fireplace, fitted to which is a screen surmounted by a canopy, the whole doing duty as a mantelpiece and over-mantel. It is decorated in blue and white, *en suite* with its surroundings, but looks very much like a portion of a summer-house let through the wall; but there are doubtless some Englishmen to whom it will give satisfaction.

*Messrs. H. J. & C. Major.*

At 836 is to be seen a collection of roofing tiles that probably possesses more interest, when one comes to know the salient features of it, than any other of its kind here shown. The exhibitors are Messrs. H. J. & C. MAJOR, of Bridgwater. Most of our readers are aware that this town is the home of the roofing tile industry, and it is well known that in other parts of the kingdom patterns that have originated here are made and sold as Bridgwater tiles, on account of the reputation this town has acquired. The firm have recently patented an invention that is adapted to all Bridgwater tiles, and is the prominent feature to which we would draw especial attention. The object of the patentees is to render nailing-down unnecessary, and to make the tile completely weatherproof, and in addition to make it non-absorbent. They have no cut or unprotected corners, but each is secured from leakage by the formation of a "rib" or "web" across the face of the upper or top end, and a corresponding one underneath the lower end, and upon close inspection it is pretty obvious

that it is impossible for rain, snow, or wind to penetrate. As regards the non-absorbent properties of the material, this is attained by subjecting the clay to an enormous pressure, which binds the atoms together so as to render the mass quite impenetrable; this is done with a steel die that impresses the pattern at the same time.

*Messrs. J. Warner & Sons.*

No. 511 is occupied by Messrs. J. WARNER & SONS, of the Crescent Foundry, Cripplegate, E.C. We naturally expect to see from a firm like this, who have gained such a high reputation, and whose connections are world wide, a display that redounds to their credit, and must record our disappointment at finding what for them is certainly a meagre collection. Upon a close examination of their stand, however, it is evident that for the reason of this one has not far to seek, and is only another case of the inability of the executive to grant exhibitors the amount of space they required, a reason that in more than one instance has prevented many exhibitors from being present at all. As we have just remarked, though, a close inspection will show that Messrs. Warner have not been slow in grasping the situation, as it would require a great amount of ingenuity to arrange a more representative assortment of their manufactures in the limited space allotted them. In the centre of the floor of the stand are one or two good baths, and arranged on either side many specimens of their excellent pumps and pumping machinery, all of which have points that will well repay an examination, while placed among them, as opportunities have occurred, are water waste-preventers, flushing cisterns, and waterclosets; of the latter, an apparatus known as the "Villa Valve Watercloset" calling for special notice. At the back are to be seen several well-fitted lavatories, an almost endless variety of water and steam fittings, heating apparatus and ventilating cowls. Lastly, we have a goodly display of copper cooking utensils, tea urns, and general braziers.

*The Patent Victoria Stone Company.*

At Stand 477 THE PATENT VICTORIA STONE COMPANY have taken up a prominent corner position that cannot fail to be noticed. Though the entries of artificial stone and concrete dressings are not particularly numerous, this company, by the variety of articles they show, have to some extent made up for the absence of other firms, and have determined that sightseers and other visitors shall be made acquainted with the different purposes for which this material has of late been so much used. At the back of the stand a number of heavy slabs such as are used for railway platform copings and similar heavy work are piled one on the other, and look very imposing, the top one being worked to show the composition. Then there are specimens of the lighter slabs as used for ordinary street pavements, &c. Arranged in front of these are samples of more strictly architectural character, as string courses, pilasters, columns, stair treads, wall copings, &c., not forgetting such things as garden vases, while an assortment of channels, sinks, and other sanitary appointments make it a very useful exhibit.

*Messrs. Hindley & Sons.*

In the complete-fitted apartments Messrs. HINDLEY & SONS, Oxford Street (380), central gallery, have a tastefully-arranged boudoir of Queen Anne character. The walls are panelled, and have pure white borders or divisions in distemper, the panels themselves being filled in with a rich Japanese washable paper. The mantelpiece and cabinet over-mantel of wood are of chaste design, and also white, the ceiling, finished with small panels, being the same in colour, and a prettily-painted frieze representing a rookery completes the wall decoration. The mantelpiece is furnished with a neat brass-fronted grate, brass kerb, &c., and tile hearth of suitable design. The chairs are covered with a slate blue silk, with floral decoration, representing last-century designs, and the curtains are of chintz minted from old blocks in possession of the firm, that have been renovated for the occasion. An oak parquet floor and Turkey rug complete the little bijou chamber.

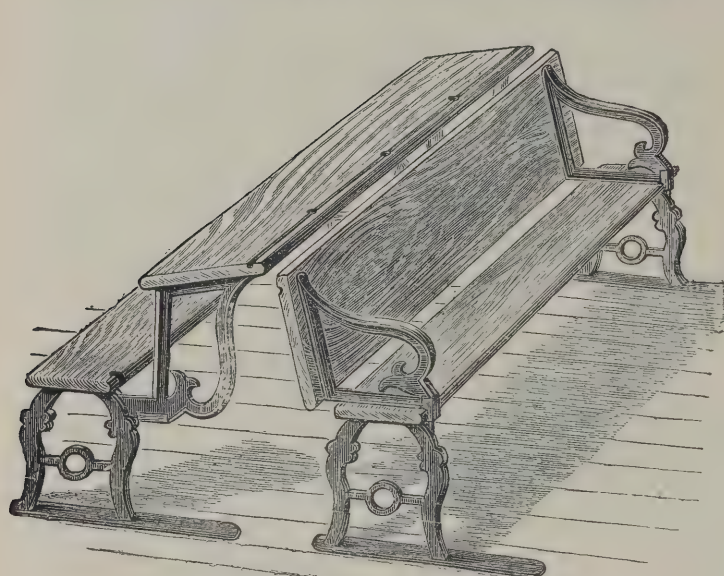
*Mr. J. Kaye.*

Stand 385 is in the vicinity of these patent window appliances and fastenings, and about it considerable interest appears to be evinced. This will be readily understood when we mention that the exhibitor is Mr. JOSEPH KAYE, 93 High Holborn. To point out the particular points in which the articles of this firm differ from all others of their kind would only be to repeat what we have already said on more than one occasion—and quite recently—in our columns. But though they may be said to be now well known to professional men and others more or less engaged in the building trades, it is quite obvious that there are numbers of laymen who have up to the present no idea of their existence, and we are glad to find Mr. Kaye embracing the opportunity of placing before the public his patent indestructible locks and latches and fastenings, that are leading the van in this important industry. They are here shown in their various adaptations for front doors, swing doors, sitting-room doors, cupboard doors, ships' use, &c., as well as a very elegant and well-designed assortment of knobs, handles, finger-plates, &c., for use in connection with them.

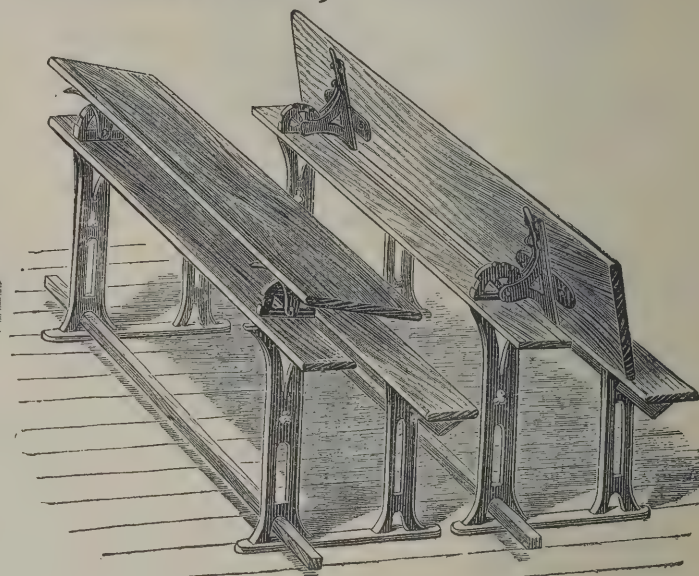


Prize Medal, London, 1862; Silver Medal, Paris, 1878.  
PRIZE MEDAL, SYDNEY, 1879; GOLD MEDAL, MELBOURNE, 1880.

# GEO. M. HAMMER & CO., SCHOOL & COLLEGE FURNISHERS, 370 STRAND, LONDON, W.C.

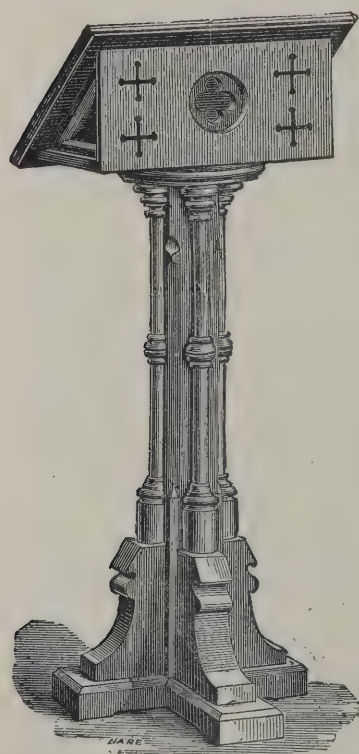


THE "OSBORNE" SEAT AND DESK.



THE "PHOENIX" DESK AND SEAT.

NEW EDITION OF CATALOGUE, WITH 160 ILLUSTRATIONS, FORWARDED POST FREE.



## Church Furniture,

LECTURE

AND

MISSION

HALL

FITTINGS

MADE TO

ARCHITECTS' DESIGNS.

ESTIMATES ON APPLICATION.



GEO. M. HAMMER & CO.,  
370 STRAND, & CROWN WORKS, BERMONDSEY.



INTERNATIONAL SMOKE ABATEMENT EXHIBITION,  
SOUTH KENSINGTON, November 1881 to February 1882.

The Judges have again conferred  
THE HIGHEST AWARD, THE SILVER MEDAL,  
To E. H. SHORLAND,

For the patent first-class Smoke Consuming and Warm-Air Generating  
MANCHESTER GRATE, "at the above Grand International Contest,  
in competition with the principal leading Manufacturers of the World."  
—N.B. Vide *Daily Telegraph*.

HOW TO WARM A HOUSE IN WINTER  
AND COOL IT IN SUMMER

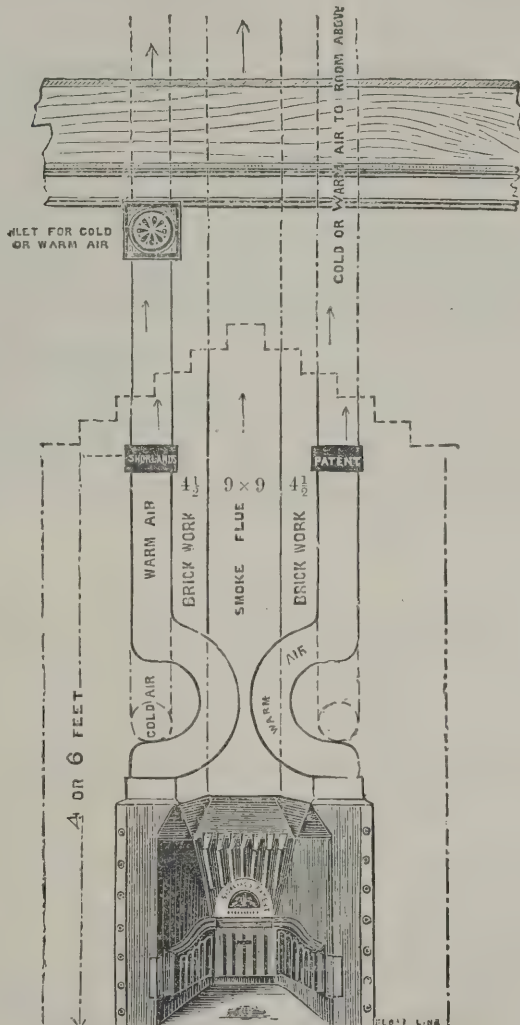
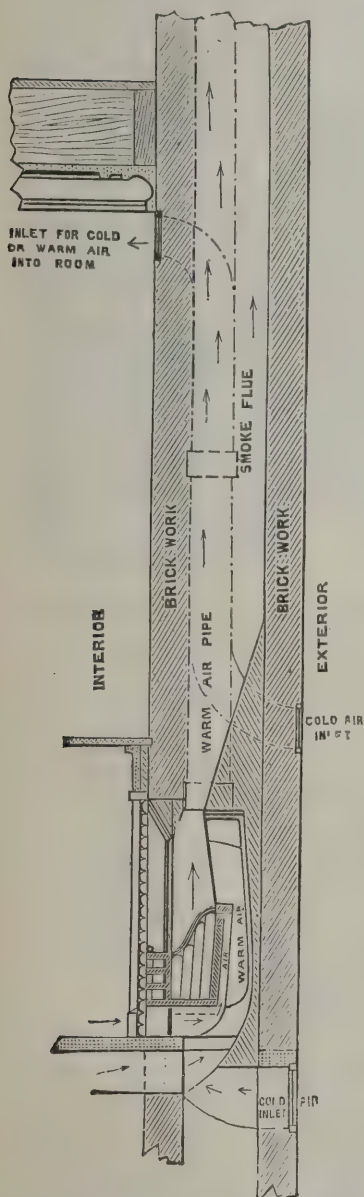
BY MEANS OF THE

# PATENT MANCHESTER WARM-AIR GENERATING GRATE BACK

APPLICABLE TO EVERY FRONT GRATE IN CONNECTION WITH

## SHORLAND'S PATENT SYPHON PIPE ARRANGEMENT,

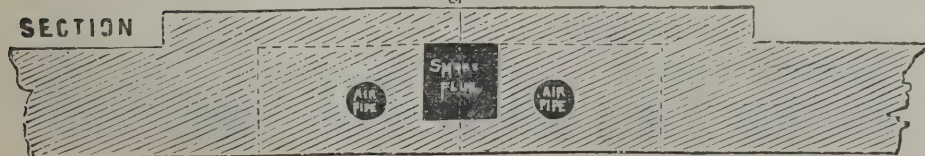
Supplied either with or without Branches for the Regulating of Warm or Cold Air to Rooms.



INTERNAL ELEVATION.

Build in pipes for warm air in the breast of chimney, just inside the  $4\frac{1}{2}$  brickwork of front of chimney breast; as building progresses, leaving the chimney breast open, say 4 feet high, till house is ready to receive grates, then build all in together.

SECTION



By this very simple Arrangement

### TWO BEDROOMS ARE WARMED,

In addition to the Room in which Fire is situate, in ground-floor rooms, or when contiguous to Room in which Grate is fixed.

### HALLS OR CONSERVATORIES WARMED.

21 BENNET'S HILL, BIRMINGHAM:  
October 27, 1881.

The Manchester Grates are acting exceedingly well, and I consider them admirably adapted for heating a small Greenhouse, as in my case, adjoining the rooms in which they are fixed.

Yours truly,  
C. A. EDGE, Architect.

LEBANON, ROSS:  
October 17, 1881.

The Manchester Grate fixed in the Board Schools here answers well.

Yours truly,  
THOS. BLAKE, M.P., Chairman.

GREAT CROSBY, NEAR LIVERPOOL:  
October 17, 1881.

The Patent Manchester Back fitted behind the old grate in my dining-room answers remarkably well in thoroughly warming my bedroom, over.

Yours, &c.,  
W. S. STEPHENSON.

#### Latest Testimonial.

Received from W. B. TATE, Esq., M.D., Medical Superintendent,  
COUNTY ASYLUM, NOTTINGHAM:

April 30, 1883.

Dear Sir,—I am much obliged for your reply to my letter of the 26th inst. I am glad to be able to speak most favourably of your Manchester Grates fixed at this Asylum. They warm the large rooms in which they are placed and the dormitories above most satisfactorily, and I am much pleased with them.

Truly yours,

Mr. E. H. Shorland. W. B. TATE M.D.

These Patent Syphon Pipes are made so that they can be kept in chimney breast, from 18 inches up to 6 feet apart, and then by this arrangement 6-inch Clay Pipes may be used at about 9d. per yard for the warm air being carried up into the Bedrooms, &c.

In rooms of great length, such as H.M. Barracks, Keyham Harbour, Devonport, the warm air deliveries are from 10 feet to 20 feet apart, the warm air by this arrangement being more equally distributed.

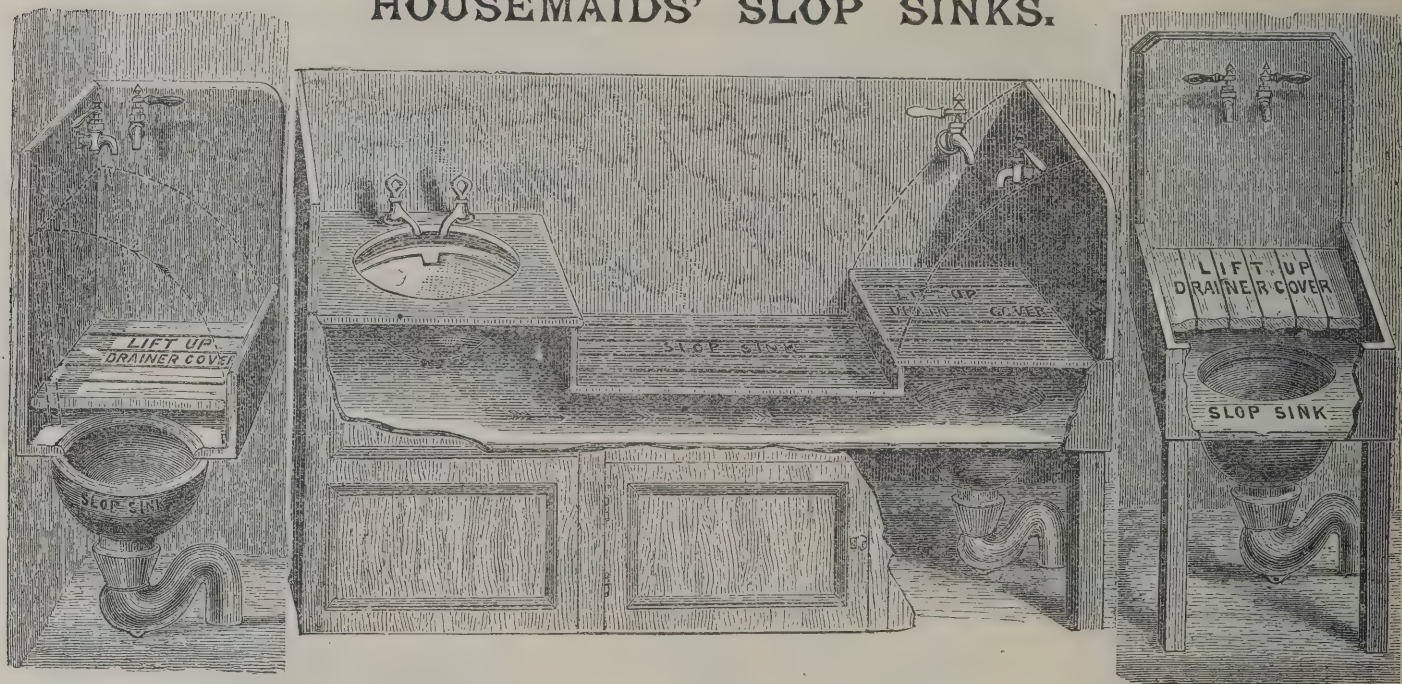
E. H. SHORLAND, The Manchester Grate Works, St. Gabriel's Works, Manchester.



ESTABLISHED **HENRY CONOLLY,** 1820.  
LEAD, ZINC, GLASS, COLOUR & OIL MERCHANT,  
IMPORTER OF FOREIGN WINDOW GLASS, GLUE, ZINC, ETC.  
MANUFACTURER OF EVERY KIND OF  
PLUMBERS', ENGINEERS', AND GASFITTERS' BRASSWORK.

DIPPING BURNISHING, AND LACQUERING DONE FOR THE TRADE.

**HOUSEMAIDS' SLOP SINKS.**



THESE Sinks are manufactured in plain or enamelled slate of various sizes, so as to fit the place they are required to be fixed, and may be placed in any angle or recess as required. Their chief use is to stay the necessity of throwing refuse down the water-closet, which is so often the result of causing stoppage, and is provided with a hopper and trap, the hopper being protected by a grating which allows water to flow away, retaining only improper substances. Every Sink is provided with a Supply Valve, either Hot or Cold, or if it is required both can be fixed; and a hinged slab is also fitted either in wood or slate, which admits of anything being stood on for any purpose that may be required.

**PRICES.**

Plain Slate with back only, fitted with Hot and Cold Supply Valves	...	...	...	...	£3	10	0
Enamelled Slate do.	...	...	...	...	4	10	0
Plain Slate with back and side fitted as last	...	...	...	...	3	15	0
Enamelled Slate do.	...	...	...	...	4	15	0
Plain Slate Slop Sink and Wash-up Sink combined, Earthenware Hopper and Trap—Hot and Cold Supply Valves	...	...	...	...	6	0	0
Enamelled Slate do.	...	...	...	...	7	0	0
Plain Slate Slop Sink, Wash-up Sink, and Lavatory combined, fitted with Earthenware Hopper and Trap—Hot and Cold Supply Valves	...	...	...	...	9	9	0
Enamelled Slate do.	...	...	...	...	11	11	0

THESE SINKS BEING MANUFACTURED ON THE PREMISES THEIR WORKMANSHIP IS GUARANTEED.

Hampstead Road; Drummond Street; and Tolmers Square, London, N.W.

(FIVE MINUTES' WALK FROM GOWER STREET STATION.)  
TELEPHONE NO. 3,525.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JUNE 14, 1884.

### COMPETITIONS OPEN.

**BURNLEY.**—July 1.—Plans are required for the Erection of Municipal Buildings, Police Courts, and Baths. Premiums of 200, 100, and 50 guineas. Mr. J. E. Stafford, C.E., Borough Engineer, Burnley.

**LINCOLN.**—The Committee for the Lincoln School of Science and Art invite Architects to submit Plans for a New School of Science and Art. A First Premium of £100, a second of £50, and a third of £25 will be awarded. The Committee will employ a competent Architect to advise them upon the Plans. Mr. Francis R. Larken, Hon. Secretary, Cantilupe Chantry, Lincoln.

### CONTRACTS OPEN.

**ASTON.**—June 28.—For Building Infectious Diseases Hospital, &c. The Surveyor, Public Offices, Albert Road, Aston.

**ASHTON-UNDER-LYNE.**—June 16.—For Taking Down Tower of Parish Church and Building New Tower. Mr. Charles Greaves, Hon. Secretary, Stalybridge Road, Ashton-under-Lyne.

**ARMAGH.**—June 21.—For Building Manse. Mr. J. H. Fullerton, Architect, Armagh.

**BALLYNAHINCH.**—June 17.—For Building Parochial Hall. Mr. Henry Ellis, Mourne View, Ballynahinch.

**BIRKENHEAD.**—June 16.—For Building Sessions Court, &c., Chester Street. Messrs. T. D. Barry & Son, Architects, Commerce Court, Lord Street, Liverpool.

**BLACKPOOL.**—June 17.—For Construction of Refuse Destructor and Chimney. Mr. T. Sunderland, Borough Surveyor, Town Hall, Blackpool.

**BOTTWNOG.**—June 14.—For Additions to Church. Rev. Jenkin Davies, Bottwnog, Pwllheli.

**BOURNEMOUTH.**—June 28.—For Erection of Sanitary Hospital and Buildings and Works in connection, Iron Fencing, Sewers, &c. Mr. G. R. Andrews, Surveyor, Town Hall Chambers, Bournemouth.

**BROWNSTON.**—June 14.—For Building Wing to Colmer House. Messrs. Farr & Sons, Surveyors, West Alvington, near Kingsbridge.

**CAMBRIDGE.**—June 17.—For Construction of Carriage Bridge over Hobson's Stream. Mr. W. J. Bowyer, Surveyor, Commissioners' Offices, Guildhall, Cambridge.

**CARDIFF.**—June 23.—For Building Stable, Coach-house, and Coachman's Residence. Mr. E. M. Bruce Vaughan, Architect, Borough Chambers, 20 St. Mary Street, Cardiff.

**CULSALMOND.**—June 16.—For Building Dwelling-house and Office Houses, Little Wrangham. Messrs. Jenkins & Marr, Architects, 16 Bridge Street, Aberdeen.

**CAMBRIDGE.**—June 21.—For Building Post Office. The Secretary, H.M. Office of Works, 12 Whitehall Place, S.W.

**DALTON-IN-FURNESS.**—June 23.—For Building Board Room, Office, Cottage, Fire-Engine House, Stabling, &c. Mr. J. Y. McIntosh, Architect, Ramsden Square, Barrow-in-Furness.

**DEPTFORD.**—June 17.—For Repairs to Vestry Hall. Mr. Walter R. Kersey, Vestry Clerk, 108 High Street, Deptford.

**DUMFRIES.**—June 17.—For Building Police Station at Johnstone Bridge. Mr. Barbour, Architect, Dumfries.

**DUNDALK.**—June 15.—For New House and Stores, for Mrs. Agnew, Jocelyn Street. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

**DUNDALK.**—June 15.—For Two Dwelling-houses, Barrack Street, for Captain Adair. Mr. W. I. Chambers, Architect, 5 Westmoreland Street, Dublin.

**DUNDALK.**—June 15.—For New Schools, New Teachers' House, Boundary Walls, New Stables, &c., for Presbyterian Congregation. Mr. W. I. Chambers, Architect, Dublin.

**DURHAM.**—June 14.—For Additions to certain County Police Stations. The County Architect, Durham.

**EAST APPLETON.**—For Additions to Farm Buildings. Mr. Francis Parr, Architect, Duke Street, Darlington.

**ECCELSFIELD.**—June 25.—For Building the Grenoside Infants' School, with Boundary Walls and Outbuildings. Messrs. Wilson & Masters, Architects, Harthead Chambers, Sheffield.

**ENNISCORTHY.**—June 20.—For Additions to District Lunatic Asylum. Mr. Morley, Building Surveyor, Commercial Buildings, Dublin.

**FORRES.**—June 18.—For Building Dwelling-house. Messrs. A. & W. Reid, Architects, Elgin.

**FROME.**—June 25.—For Construction of Gasholder Tank. Mr. William Dunn, Secretary, King Street, Frome.

**GATESHEAD.**—July 16.—For Construction of Passenger Station, Platform, Roofing, Offices, Shops, &c. Mr. William Bell, Architect, Central Station, Newcastle-on-Tyne.

**GRANTHAM.**—June 23.—For Additions to Methodist Church. Mr. A. H. Goodall, Architect, Market Street, Nottingham.

**HAMPSTEAD.**—June 20.—For Building Boundary Wall for Metropolitan Asylums Board. Messrs. Pennington & Bridgen, Architects, 8 John Street, Adelphi.

**HANLEY.**—June 20.—For Building Two Villa Residences. Messrs. R. Scrivener & Sons, Architects, Howard Place, Hanley.

**HAWICK.**—June 28.—For Building Municipal Buildings. Mr. J. C. Walker, 2 N.E. Circus Place, Edinburgh.

**HIGHBURY.**—June 16.—For Building Sorting Office. Mr. A. B. Mitford, Secretary, H.M. Office of Works, 12 Whitehall Place, S.W.

**HIGH WYCOMBE.**—June 16.—For Building Schoolroom and Class-rooms, Construction of Organ Chamber at the Union Chapel, &c. Mr. Arthur Vernon, Architect, High Wycombe.

**HUNSLLET.**—June 20.—For Additions to Sunday School. Mr. John E. Leak, Architect, Hunsllet.

**ILKESTON.**—For Building Three Shops and Alterations to Twenty-four Houses. Mr. George Haslam, Architect, Ilkeston.

**IPSWICH.**—June 19.—For Building Infirmary at St. John's Home. Mr. Brightwen Binyon, Architect, Princess Street Chambers, Ipswich.

**KEITH.**—June 14.—For Repairs to Parish Church. Mr. F. S. Robertson, Architect, Fife-Keith.

**KETTERING.**—June 26.—For Construction of Brick Sewers and Removal and Reconstruction of Outfall Works. Mr. R. W. Johnson, Surveyor, 1 George Street, Kettering.

**LANCASTER.**—June 16.—For Building School, Laundry, Swimming Bath, &c., Ripley Hospital. Mr. W. Wright, Surveyor, Lancaster.

**LANGLEY MOOR.**—June 16.—For Building Schools. Mr. W. Stow-Stowell, 7 Bond Gate, Darlington.

**LEEDS.**—June 18.—For Construction of Sewers. Mr. T. Hewson, Borough Engineer, Municipal Buildings, Calverley Street, Leeds.

**LEEK.**—June 16.—For Building Boys' School for the Governors of St. Edward's Church. Mr. J. G. Smith, St. Edward Street, Leek.

**LLANDUDNO.**—June 24.—For Building Cottage Hospital. Mr. A. Foulkes, Architect, Mostyn Estate Office, Llandudno.

**LLANFAES.**—June 24.—For Building Memorial Chapel at the Church. Mr. R. G. Thomas, Architect, Menai Bridge.

**LLANGRANOG.**—For Restoring Church. Mr. E. H. Lingen Barker, Architect, 6 King Street, Hereford.

**NANTYGLO.**—June 14.—For Building School for 331 Children. Messrs. Blessley & Aspinall, Architects, Guildhall Chambers, St. Mary Street, Cardiff.

**TRANMERE.**—June 18.—For Pulling Down Cottages and Building Stone Retaining Wall (100 yards). Mr. T. C. Thorburn, Borough Surveyor, Hamilton Square, Birkenhead.

**ULVERSTONE.**—June 14.—For Building School. Mr. J. W. Grundy, Architect, Ulverstone.

**WATFORD.**—June 14.—For Building School and Alterations to existing School. Mr. W. H. Syme, Architect, 52 High Street, Watford.

**WEOBLEY.**—June 14.—For Additions to Police Station. Mr. W. Chelake, County Surveyor, Hereford.

## MANUFACTURERS AND IMPORTERS OF MARBLE AND WOOD CHIMNEY PIECES.

QUEEN ANNE

ELIZABETHAN

AND  
RENAISSANCE

GRATES

STOVE GRATE MANUFACTURERS AND IRONFOUNDERS,

STOVE GRATES

KITCHEN RANGES

FENDERS

AND  
RAILING

MANTELS

OVER MANTELS

ART TILES

AND  
HEARTHES

# GEORGE WRIGHT & Co.

SHOW-ROOMS:

155 QUEEN VICTORIA STREET

And 238 Upper Thames Street, Blackfriars, E.C. — WORKS, ROTHERHAM.



## TENDERS.

## ALDERBURY.

For Additional Cells to Tramps' Ward at the Workhouse, Alderbury. Messrs. JOHN HARDING & SON, Architects, Salisbury.		
Young & Sons, Salisbury	£253	0 0
Harris, Salisbury	249	0 0
Tryhorn, Salisbury	237	0 0
Rolls, Salisbury	230	0 0
Dibben, Salisbury	227	0 0
HALE, Salisbury (accepted)	225	0 0

## BARTON-UNDER-NEEDWOOD.

For Earthenware Pipe Sewers, Sewage Straining Tanks, Manholes, Flushing Sluices, &c., Barton-under-Needwood.		
J. & C. Hunter	£895	0 0
Corrall & Lewis, Birmingham	825	0 0
Philbrick, Burton	736	0 0
Stevenson, Chesterfield	670	0 0
Hodges, Burton	670	0 0
Harris, Shrewsbury	650	0 0
Dickson, Burton	650	0 0
Perkins, Burton	633	13 4
Freeman, Stafford	619	19 0
Lowe & Sons, Burton	610	0 0
Hilton & Sons, Birmingham	599	0 0
Smith & Co., Leicester	591	11 1
Buckle & Co., Leicester	585	6 8
M'Kay, Stoke	580	0 0
Corrie, Lichfield	578	0 0
FRAYNE & CO., Broomsgrove (accepted)	554	11 7
Surveyor's estimate	550	0 0

## BASINGSTOKE.

For Building Hunting Stables, Coach-houses, &c., South View, Basingstoke, for Mr. Fred. Marsh. Mr. JOHN HILLARY, Architect, Longparish, Hants.		
Grace, Wallop	£554	0 0
Beale, Andover	547	0 0
Mussellwhite, Basingstoke	535	5 0
Pike, Basingstoke	507	12 0
TIGWELL, Basingstoke (accepted)	503	10 0

## CAISTOR.

For Alterations and Additions to Residence, at Caistor, for Mr. Wm. Tritton. Mr. E. W. FAREBROTHER, A.R.I.B.A., Architect, Grimsby.		
PHILLIPS, Nettleton (accepted)	£375	0 0

## CARDIFF.

For the Erection of Stables off Charles Street, Cardiff, for Mr. James Howell. Mr. J. P. JONES, Architect, 26 Park Street. Quantities by Architect.		
Shepton, Cardiff	£3,465	0 0
Eastbrook, Bristol	3,460	0 0
Jones Bros., Cardiff	3,400	0 0
Lewis, Cardiff	3,399	0 0
Davies	3,300	0 0
LOCK, Cardiff (accepted)	3,170	0 0

## CHERTSEY.

For Fishing-box and Boat-house to be erected at Docket Point, near Chertsey. Mr. C. WELCH, Architect and Surveyor, London Street, Chertsey.		
Fishing-box. Boat-house.		
Nesmyth, Chertsey	£1,050	0 0
Nightingale, Lambeth	929	0 0
Martin, Addlestone	885	0 0
Oades & Son, Egham	837	0 0
Woods, Weybridge	815	0 0
HUNT, Chertsey (accepted)	809	0 0
	135	0 0

## CLEETHORPE.

For Alterations and Additions to Residence, Cleethorpe, for Mr. Joseph Chapman. Mr. E. W. FAREBROTHER, Architect, Grimsby.		
RIGGALL & HEWINS (accepted)		

## CLIFTON.

For the Erection of a Dry Hall in High Moor Lane, Clifton, near Brighouse, Yorks., for Sir George Armytage, Baronet. Mr. R. F. ROGERSON, Architect, Brighouse.		
Whitaker, Huddersfield	£49	10 0
Lumb, Brighouse	43	15 1
Wood, Harthead	40	14 1
Fearnley, Brighouse	39	9 6
Pearson, Cleckheaton	38	18 10
Eastwood, Cleckheaton	35	13 10
WESTWOOD, Southowram (accepted)	35	6 9

## COVENTRY.

For Building House, Cowshed, &c., at Farm Premises, Brinklow, for the Trustees of Holy Trinity Church Estate, Coventry. Mr. HERBERT W. CHATTAWAY, Architect, Trinity Churchyard, Coventry.		
Lord, Coventry	£579	3 0
Hallam & Co., Coventry	570	0 0
Wootton, Coventry	550	13 0
Norwood, Coventry	511	0 0
Mayo, Coventry	500	0 0
Blakeman & Son, Coventry	462	17 0
Garlick, Coventry	453	0 0
LESTER, Coventry (accepted)	426	14 0
Wright, Foleshill	383	4 6
For Alterations to Britannia Hotel, Coventry. Mr. WILLIAM LANGLEY, Architect, Coventry. Quantities not supplied.		
Waters, Coventry	£625	0 0
Steel, Birmingham	567	11 3
Worwood, Coventry	543	0 0
Leicester, Coventry	539	0 0
BENNETT, Birmingham (accepted)	457	0 0

## FARNHAM.

For Erection of an Engine and Exhaustor House for the Farnham Gas Company.		
Goddard & Son	£156	0 0
Diamond	163	0 0
FARRATT (accepted)	138	0 0

## DOWNEND.

For Additions to the Mangotsfield and Downend National Schools. Mr. J. HODDELL, Architect, Downend, near Bristol.		
Baber, Downend	£793	10 0
Wibley, Bath	791	0 0
King & Son, Bilton	774	0 0
C. A. Hoyes, Bristol	730	0 0
Nicholas, Bristol	538	0 0
Wren, Bristol	437	0 0
Architect's estimate	654	0 0

## Mangotsfield School only.

Gunblett, Bristol	£291	10 0
J. Hoyes, Upton, near Bristol	250	0 0

## GRAVESEND.

For Building Schools for 450 Children, Milton Road, Gravesend. Mr. W. F. GOSLING, Architect, 9 Walbrook, London, E.C. Quantities by the Architect.		
R. & H. Pickersgill	£5,679	0 0
Kirk & Randall	5,564	0 0
Puffee	5,336	0 0
W. & E. Wallis	5,200	0 0
Wallis & Clements	5,186	0 0
Archer	5,170	0 0
Seager	4,900	10 0
Humphris	4,545	0 0
Nightingale	4,285	0 0
No tender accepted, the lowest being more than the Board wish to expend on that site.		

## GREAT GRIMSBY.

For the Erection of Schools in Connection with St. John's Church, New Clew. Mr. E. W. FAREBROTHER, A.R.I.B.A., Architect, Grimsby.		
Riggall & Hewins	£730	0 0
Jolland & Chapman	669	0 0
Topbam	668	0 0
Nightingale & Danby	660	0 0
SIMONSON (accepted)	563	18 0

## HALIFAX.

For Pulling Down the Old Nag's Head Inn, King Cross Street, Halifax, and Rebuilding Three Shops, Offices, House, &c. Mr. C. F. L. HORSFALL, Architect.		
Booth & Son, Clayton, mason	£600	0 0
Wadsworth & Son, Halifax, joiner	287	0 0
Holdsworth, Halifax, plumber	105	0 0
Taylor, Ovenden, plasterer and slater	93	0 0
Berry, Halifax, ironwork	35	0 0
Binns, Halifax, painter	25	0 0
Total	£1,145	0 0

## HATTON.

For Building new Free Church at Hatton, Cruden, for the Free Church Congregation of Cruden. Mr. Wm. DAVIDSON, jun., Architect.		
Smith, mason	£511	0 0
Davidson, carpenter	400	0 0
Fyvie, slater	92	0 0
Stuart & Co., plasterer	74	0 0
Wright, painter	23	0 0
Total	£1,100	0 0

## IPSWICH.

For Restoration of Tower and South Aisles, St. Matthew's Church, Ipswich. Mr. E. F. BISSHOPP, Architect.		
Smith	£1,377	7 0
Kenny	1,174	10 0
Thwaites	1,165	0 0
TOOLEY (accepted)	1,075	0 0

## KETTERING.

For Widening Northall Bridge, Kettering. Mr. R. W. JOHNSON, Surveyor, 1 George Street, Kettering.		
Sharman, Kettering	£156	0 0
C. & F. Henson, Kettering	162	5 0
Barlow, Rothwell	150	0 0
Neal, Kettering	148	0 0
SPARROW, Kettering (accepted)	145	0 0

## LIVERPOOL.

For Erection of Structure at Liverpool for holding the National Eisteddfod of Wales.		
HOLMES & WEBSTER, Ashton-under-Lyne (accepted)	£850	0 0

## LONDON.

For Rebuilding No. 34 King Street, Cheapside, E.C. Mr. RICHARD CREED, F.R.I.B.A., 45 Great Marlborough Street, W.		
Lawrance & Sons	£2,695	0 0
G. H. & A. Bywaters	2,685	0 0
Brass	2,660	0 0
Bangs & Co.	2,590	0 0
Patman & Fotheringham	2,577	0 0
Colls & Sons	2,470	0 0
Nightingale	2,353	0 0
For Erection of Dining Hall (to seat 1,000 Inmates), Kitchen, Covered Ways, &c., at the Workhouse, Sidney Road, Homerton.		
Fish, Prestige, & Co.	£10,446	0 0
Shaw	9,558	0 0
Boyce	9,370	0 0
Hart	9,860	0 0
Stephens & Bastow	9,699	0 0
Sharman	9,600	0 0
Garud	9,500	0 0
W. & D. McGregor	9,400	0 0
Nightingale	9,281	0 0
Bull & Sons	9,177	0 0
Holland	9,099	0 0
Marr	9,098	0 0
Harper	9,089	0 0
Priestley & Gurney	9,070	0 0
Allard	9,000	0 0
SHURMUR (accepted)	8,946	0 0

## LONDON—continued.

For Making-up Roadway and Paving the Footways, Falstaff Yard, Tabard Street, for the Vestry of St. George-the-Martyr, Southwark.		
E. & H. Beavers	£228	0 0
Mowlem & Co.	192	0 0
Brunswick Rock Asphalt Company	175	0 0
Wheeler & Hindle	174	0 0
Trehearne	246	0 0
Butler (accepted)	163	0 0

## LONG EATON.

For Erection of Bakery and Store-room, for the Long Eaton Co-operative Society. Mr. F. SMITH, Architect, Manchester.		
Stone, Long Eaton	£1,984	6 6
Bull, Long Eaton	1,630	1 0
Brown, Long Eaton	1,555	12 0
Bramley & Pepper, Long Eaton	1,476	0 0
Youngman, Long Eaton	1,475	0 0
Poxon & Rice, Long Eaton (accepted)	1,472	10 0
Wheatley & Maull, Nottingham	1,460	0 0
Ross & Harrison, Nottingham	1,278	0 0

## LOUGHREA.

For Erection of Building, adjoining the Workhouse Hospital, intended for Residence for the Nuns acting as Nurses, Loughrea.		
SWEENEY (accepted)	£668	0 0

## LYMINGTON.

For Constructing Sewers, Lymington. Mr. J. LEMON, Engineer, Southampton.		
Whetnam, Weymouth	£280	0 0
Hayter, Portsmouth	258	0 0
Sanders, Southampton	230	0 0
Hall & Co., Portsmouth	224	18 8
Crook & Smith, Southampton	217	0 0
REEKS, Lymington (accepted)	202	0 0
Tripp, Lymington	198	0 0
Buckle, Lymington	189	0 0

## LYNN.

For Erection of Buildings for the Church of England Young Men's Society, King's Lynn. Mr. E. J. COLMAN, Architect, Lynn.		
Girling, Wisbeach	£1,195	0 0
Brown, Lynn	1,130	0 0
Thing, Lynn	1,073	0 0
Leach, Lynn	1,068	0 0
Langley, Lynn	1,065	0 0
Dawes, Lynn	1,047	0 0
Bardell Bros., Lynn	1,023	0 0
Wanford, Lynn	1,015	0 0
Chilvers, Snettisham	1,010	0 0
Hicks, Peterborough	1,000	0 0

## MAIDSTONE.

For the Erection of a Mission Church and Vestry in the Parish of St. Michael's and All Angels. Mr. H. BENSTED, Architect.		
Wallis & Clements	£844	0 0
Froud, jun.	837	0 0
Avard	793	0 0
Elmore	770	0 0
VAUGHAN (accepted)	747	0 0
Architect's estimate	820	0 0

## MARKET HARBOROUGH.

For Drainage Works at the Workhouse, Market Harborough.		
BARLOW & SON (accepted)	£260	0 0

## NEW BUSHEY.

For Drainage Works at New Bushey. Messrs. BAILEY DENTON, SON & NORTH, Engineers.		
Haselgrove	£9,699	0 0
Killingback	8,194	0 0
Nowell & Robson	7,584	0 0
Walker	7,076	0 0
Nicholls	5,775	0 0
Pratt	5,555	0 0
Carter	5,527	0 0
Thomas & Cardis	5,448	0 0
Potter	5,124	0 0
Cook & Co.	4,750	0 0
Saunders	4,661	0 0
J. W. & J. Neave	4,510	0 0
Dickson	4,303	0 0
Redhouse	4,271	0 0
Cowdery	4,126	0 0
Pitt	4,100	0 0
Russell & Co.	3,609	0 0
Engineer's estimate	4,638	0 0

## NEWCASTLE-ON-TYNE.

For Enlargement of the County Asylum and Erection of Steward's House, Newcastle-on-Tyne.		
Enlargement of Asylum.		
Green & Douglas, Amble	£31,761	19 1
House.		
Green & Douglas	922	0 0

This was the lowest of eighteen tenders received for the work, and was recommended for acceptance. The consideration has been deferred to the Midsummer Quarter Sessions.

## NEW TREDEGAR.

For Building Forty Cottages at New Tredegar, for the Powell Duffryn Steam Coal Company, Limited. Mr. CHARLES TAYLOR, R.I.B.A., Architect, 22 Duke Street, Cardiff.		
Edmondson, Newport	£6,600	0 0
Morgan, Aberdare	5,600	0 0
Williams, Merthyr	5,800	0 0
Jones & Price, Treharris	5,500	0 0
MORGAN & EVANS, Pontypool (accepted)	5,360	0 0



OBAN.

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EDDINGTON & SON, Phoenix Ironworks, Glasgow (accepted) . . . . . 7s. 2d. per foot

OLDROYD.

For Farm Buildings and House at Oldroyd, near Todmorden. Mr. JESSE HORSFALL, Architect. Quantities by the Architect.

Accepted Tenders.  
Lumb, mason and bricklayer.  
Mallison, carpenter and joiner.  
Barnes & Son, slater.  
Whitaker, plumber, &c.  
Blacka, plasterer,

PEASEMORE (BERKS.).

For Building Two Pairs of Cottages at Rowdown Farm, Peasmore. Messrs. WAINWRIGHT & HEARD, Surveyors, Shepton Mallet.

Botsford, Newbury . . . . . £593 0 0  
Elliot, Newbury . . . . . 580 0 0  
Elms, Stockcross, Newbury . . . . . 470 0 0

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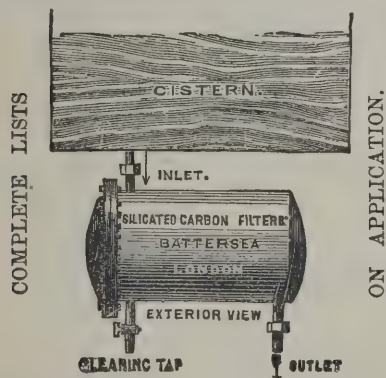
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For Sewage Purification Works, Sheffield. BISSETT (recommended for acceptance) . £23,960 0 0

STOURBRIDGE.

For Heating Music-room, for Mr. J. Mathews, Summer Bank, Clent. RENTON GIBBS, Liverpool (accepted).

SOUTH SHIELDS.

For New Shop, Alterations and Additions to Property, Wellington Street, South Shields, for Mr. H. T. Duncan. Mr. HENRY GRIEVES, Architect, Fowler Street, South Shields.

Moore, South Shields . . . . . £335 0 0  
Haggerston & Ormsby, South Shields . . . . . 325 0 0  
WEDDLE, South Shields (accepted) . . . . . 313 0 0

For Supplying and Laying Pipe Sewer. Mr. M. HALL, Borough Engineer, South Shields.

24-Inch Pipe Sewer.

Craig . . . . . £503 0 0  
Hornsbly . . . . . 394 10 9  
Marshall & Moody (withdrawn) . . . . . 325 4 0  
Surveyor's estimate . . . . . 400 0 0

Relaying Sewer.

Hornsbly . . . . . 123 3 1  
Marshall & Moody . . . . . 120 14 0  
CRAIG (accepted) . . . . . 113 0 0  
Surveyor's estimate . . . . . 110 0 0

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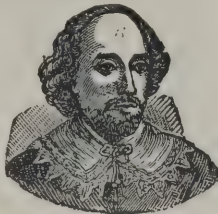
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For the Erection of New Business Premises, Market Place and King Street, South Shields, for Mr. Thos. Crofton. Mr. HENRY GRIEVES, Architect. Quantities by Mr. G. D. Irwin, Sunderland.  
Thompson, Gateshead . . . . . £2,010 13 11  
Elliot, North Shields . . . . . 1,728 0 0  
HUDSON, South Shields (accepted) . . . . . 1,587 19 9  
Miller, Gateshead . . . . . 1,486 6 6

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Reavell, Staines . . . . . 952 0 0  
Norris, Bracknell . . . . . 794 7 6  
Baker, Staines . . . . . 763 8 0  
POWELL, Staines (accepted) . . . . . 685 0 0

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ADKINS (accepted) . . . . . 864 0 0

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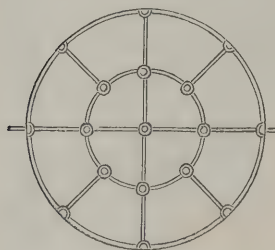
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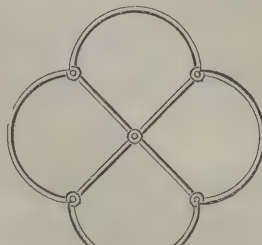
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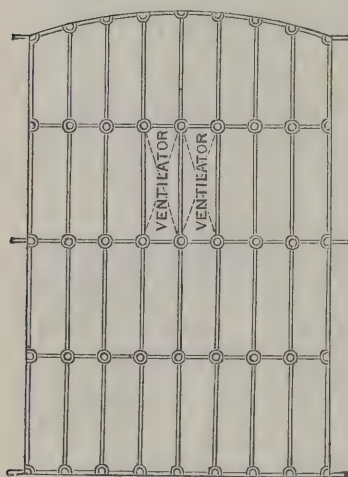
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The Patentee begs to call particular attention to the great strength of this construction. The Bars and Bosses, being of malleable wrought iron, form an exceedingly firm joint at the intersection of bars. They are durable, and of light appearance, the Bosses being small and not unsightly. They can be made at very short notice, and at the price of an ordinary cast iron sash.

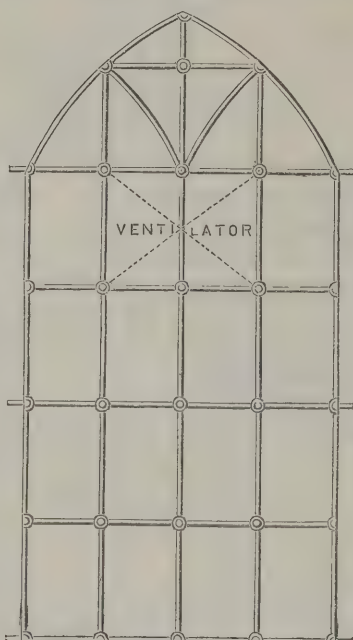
PRICES UPON APPLICATION.



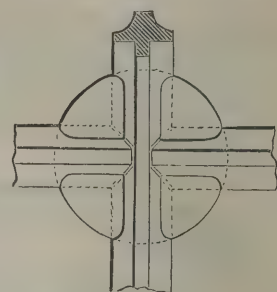
CABLE LIGHT.



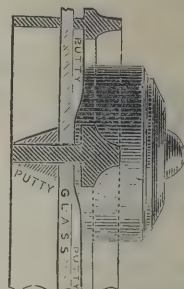
CLOSE BAR SASH, obviating use of Window Guards.



ORDINARY WAREHOUSE AND SCHOOL SASHES.

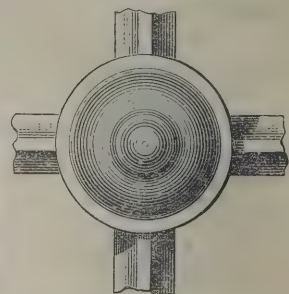


Back view of Boss, full size.



Section through Boss, full size.

These can be glazed flat, like ordinary wooden sashes, without the corners of the panes being chipped off.



Front view of Boss, full size. Obscuring no appreciable light.

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# The Architect.

## THE ARTISTIC PUBLIC.



HERE is in every community which has any pretension to education in these days a certain section which may be called, and often is called, the artistic public. At the present moment it is one of the most promising characteristics of English society that this artistic public is advancing rapidly in numbers, in intelligence, and in influence both at home and abroad. It is not merely that larger crowds of people are found to visit the orthodox Academy Exhibition. Nor is it that another company, smaller but more enthusiastic, is to be found every day in the week at the heterodox rooms of the Grosvenor Gallery. Neither need we refer particularly to the enthusiasm of the "dispersions" at CHRISTIE'S, or to the continually increasing number of the picture-shops which, under various imposing names, are taking possession of St. James's. All these incidents take their part in the general scheme of progress, no doubt, but they do not constitute that scheme. The English people are not being led by professional influences towards the recognition of art; they are steadily acquiring tastes whose demands the professional influences do not always find it easy to answer with sufficient readiness.

But shall we ever have in England—or, say, in London, or even in the West End of London—such an artistic public as shall, to some extent, give the law to the authorities and the Legislature? Is it to be supposed that the people at large, through their representative bodies, will ever think it right and proper to regulate the public expenditure in such a way as to introduce the encouragement of art amongst political purposes? To put the inquiry even more simply, or more modestly, how long may it be before the artistic public of London will manifest sufficient interest in public monuments, buildings, and decorations to compel those who happen to have charge of them to submit their proceedings to general criticism beforehand, instead of defying it afterwards? All such questions, we need not say, are reducible to one form, which is this:—When will the opinion of cultured people at large, which has already assumed a definite control over many things quite as difficult to deal with, feel able to assert authority over the development of the artistic work of the country, as one of the chief elements of national prosperity? It is impossible to press this too urgently or too plainly in these days.

There is one somewhat cynical answer which may be offered freely, indeed glibly enough. The taste of the public is making progress, it may be said, undeniably, but in a desultory and almost frivolous way, seeming to be very much like the wind that bloweth where it listeth, no one knowing whence or whither. To say nothing of proceedings at theatrical performances, fancy fairs, dancing parties, and many other such demonstrations more or less above or beyond criticism, we find a little multitude of the most private of private houses, which used to be laid out upon a strictly comfortable and domestic plan, for living in and nothing but living in, twisted now into one odd form after another, more for showing off in than anything else—showing off quaint architecture, quaint furniture, quaint pictures, decorations, ornaments, even quaint dresses which the ladies consent to wear and call fashionable in order to fall in with the whole histrionic game of equipment. But where is all this to end?

It is to end, we take leave to answer, in the formation of a new artistic public; or rather, if it is to accomplish this result, and then appear to end nowhere, we may be perfectly satisfied. The popular fashion in art, it must be confessed, does not seem to aim just now at anything very classically or delicately refined; if the more elegant spirits of the world, at home and abroad, call it a little coarse, the impeachment can scarcely be denied. But is not this what ought to be expected? When we come to look candidly at ourselves as a nation, is it not very plainly to be seen that the multitude of us is composed of somewhat rude islanders, who have been living for all these ages very much out of the way of the world's intercourse,

except in trade, and who, now that one rejoices to see them acquiring culture and taste, must really be allowed, not only a reasonable time for learning the lesson, but a little liberty in spelling it out in a rough-and-tumble way of their own?

A national taste is acquired very slowly in any case; even a mere improvement in style of design takes many years. So plainly is this the case that it seems to be a question whether the progress of such a movement does not in reality consist in the simple process of letting one generation die off and another grow up, until, like the three generations that make a gentleman, several generations, according to circumstances, may make an artistic public. Now, there is at the present moment, as everybody admits, a very decided change indeed going forward in English taste. Our young people of the æsthetic or artistic order are quite entitled to regard their fathers and mothers as authorities obsolete, even when those fossils in their day looked upon their own progenitors in the same scarcely respectful light. That the little people who are now in the nursery will still carry forward the principle in their turn is so far perfectly certain that this is what we rejoice in with enthusiasm as the progress of modern times; a progress to which we are not disposed to allow any discernible limits. It may not be quite agreeable, perhaps, to Mr. RUSKIN, Mr. BURNE JONES, Mr. WHISTLER, and others, to reflect that the time is rapidly approaching when their bright new candlesticks will be put out of their places, but such is their destiny beyond all question; there is nothing so certain to happen as the unexpected, even in artistic neology, and to this complexion must the mightiest of prophets come at last. When the new artistic public of Mr. RUSKIN's dreams arises in its strength, what is it likely to care for Mr. RUSKIN? Every generation of us, if the truth may be told, cares only for its own pre-eminence, and kicks down the ladder—except now and then for curiosity's sake—by which it has achieved its rise.

Setting aside, then, in what wholesome and magnanimous way we can, all personal and individual considerations, and looking with a single eye at the great stream of national progress, we may well be gratified in England to see that element in the social system which we call the artistic public increasing as it is both in volume and in quality; and, if the idea may be once more repeated, we may well consent to accept whatever little eccentricities an extremely practical people may happen to exhibit in developing a feeling which in so many respects is to them a new sensation. Indeed, such of us now living as consider ourselves to be for various reasons before the age—being of course very frequently considered for the same reasons to be behind it—and therefore are inclined to indulge in impatient opinions about the Queenannery, for instance, that is going on around them, will certainly not live long enough, as matters go, to see the world so very wise as they could wish, and must either learn to bear with human nature or go on grumbling to the end. It is a theory that will bear a good deal of looking at when it is suggested that even the wildest and weakest efforts of our Queen Anne work, and the least robust of our manifestations of homage for Netherlandish *bric-à-bac*, contain in them the latent elements of a vast development of art on almost new lines that will be English lines. Great enterprises have small beginnings, and, even if the sometimes whimsical and frivolous struggles of our æstheticism were a smaller beginning than they are in any intelligible direction towards greatness, let us not misunderstand the matter; there is an indisputable earnestness in even the feeblest of it all which bespeaks success in some form, and in a form which when the time comes cannot be otherwise than worth waiting for.

The artistic public, such as it is, is beginning to acquire considerable authority already; but, before it is able to constrain men of business in high places to pay attention to the claims of art, it must at least attain to a character of greater repose. It would be scarcely provocative of general respect if the Metropolitan Board were to be under the presidency of Mr. OSCAR WILDE, or even if the House of Lords were to acknowledge the leadership of Baron TENNYSON. But no amount of teaching, or of preaching, will make the world move more quickly than it can. It is enough for us to be able to rejoice in the daily advance that is being made, and to feel that our most sanguine hopes have every appearance of being abundantly realised all in good time. All the while, if we need not be more impatient than we can help, let us still be as impatient as we must; even our impatience is part of the programme.



## THE PARIS CARPENTERS.

ONE of the most influential trade associations in Paris is the *Chambre Syndicale des Ouvriers Menuisiers en Bâtiments*, or, in other words, the Society of House Carpenters and Joiners. It not only watches over the interests of the workmen and supports them in disputes with employers, but also undertakes the technical education of apprentices. In some respects it is like an English society; but in others, as will be seen, there is a vast difference. The operations of the society are almost unknown in England, and seem to have escaped the notice of the Commissioners on Technical Education when they visited Paris. Some account of the statutes may accordingly have interest. In their present form they were voted at a general assembly of the members, which was held in July 1882.

The preamble states that, in presence of the accumulation of capital in the hands of privileged people, and considering that the portion allowed to the labourer by those detainers of capital is illusory and renders existence almost impossible to the true producers of wealth and their families, co-operation is necessary. A coalition of operatives is required to resist the efforts of the coalition of capitalists by which labour is now menaced. The condition of affairs is too grave to sanction a scheme of partial co-operation, or one limited to Parisian workmen. Trade co-operations cannot remain isolated without prejudice to their common interests. It is the power derived from association which enables the workman to enjoy his wages and to keep the amount up to a legitimate standard, and by it alone he may aspire to be benefited by an economic emancipation. The Syndical Chamber therefore at the outset affirms the principle of solidarity, and in order to aid in its universal acceptance declares that every working carpenter, whatever may be his nationality, is eligible to become a member of the Paris society.

The first article of the statutes states that the society is to be constituted entirely of carpenters employed on buildings, who reside in the department of the Seine, and accept the regulations of the society. There is to be no distinction of age or nationality. The number of members is to be unlimited. But any member who becomes an employer or a dealer will thereby be considered as having resigned his membership. The sum to be paid on entering is 1 fr. 75 c., which includes the subscription for the first month. The subscription is 1 fr. a month, which can be increased in case of an emergency, and on the decision of a general assembly. The subscriptions are to be paid to the receivers at the hall on the days of meeting, or at their houses at specified times. A member of a provincial society who may come to work in Paris is admissible without payment of the entrance fee of 75 c.

As the society was founded in order to watch over the moral and material interests of the trade, the statutes enjoin that its efforts are to be directed in the first place so as to insure that the rate of wages shall be in a relation to the needs of the journeyman; it is to march always in the way of progress, and to seek by a study of the organisation of labour for the most equitable means to assure the existence and procure the happiness of workmen. Technical classes are accordingly to be opened, and a library formed for the use of members and apprentices. The society is also to give attention to the election of *Prud'hommes*, or tribunal of experts, which deals with matters in dispute between masters and men, and is one of the most useful of French institutions. Many strikes have been obviated by the Council of *Prud'hommes*. The society is to aid in every way that is possible in founding syndical workshops, and it may be remarked that contracts for public works are often undertaken. It is also to enter into relations with the other trade societies, and to support them on the condition of reciprocal support.

The syndicate of the Carpenters' Society is constituted as follows. There is a council of fifteen of the members who are elected by ballot at the first meeting held in January; and, secondly, a committee of control consisting of five members. The syndics are elected for a year. At the July meeting eight members (who are drawn by lot) are supposed to retire, but can be re-elected. A retiring member of the council is always eligible for re-election, but to make the nomination complete, the presence of the candidate at the meeting is necessary. All the members of the council are held to be equally responsible for the administration of the

affairs of the society. The officers of the society are selected by the council, and consist of a secretary, an assistant secretary, a treasurer, and a finance commission of five receivers or collectors. Each one of these officers is held to be legally responsible for the acts and functions which are confided to him by the council. The duties of the council consist in the enforcement of the statutes, in receiving and investing the funds, and distributing them to the members who are entitled to be recipients. The council has charge of the meetings, convocations, elections, arrangement and publication of reports upon the affairs of the society, the admission or rejection of demands and claims, &c. If any cases should arise for which no provision has been made in the statutes, they are to be determined by the council, but subject to rectification at a general assembly of the members. The secretary is to prepare the official reports of the general meetings, to attend to the correspondence, which is always to be communicated to the council; to take care of the archives, for which he is accountable, &c. Every document which bears the name of the society is to have the official seal of the syndics. Thrift is characteristic of French institutions, and all the money that is placed in the hands of the secretary is a sum of thirty francs, with which he is to meet the charges of the office and to defray unexpected expenses. The assistant or adjoint secretary is to prepare the minutes of the council meetings, and is to replace the secretary should the latter be absent. In order to facilitate reference it is directed that reports, minutes, letters, and other documents which relate to the affairs of the society are to be marked with a number and registered.

The treasurer is responsible to the council for all money entrusted to him. He is to take the subscriptions from the collectors, and is specially charged with the accounts, which are to be kept in good order and in the clearest way. There is to be an account of receipts and expenses, besides the register of general subscriptions. Another book is to show the receipts and disbursements in connection with the technical classes. A receiver is to keep a book containing the names and addresses of the members of his section, from whom he collects subscriptions. He is bound to report any irregularity in the payments. The receivers are to attend the general meetings, and at the first meeting of the council following a general meeting they are to render an account of their receipts to the treasurer, who will deposit the money in the chest of the Syndicate. The three keys of the chest are to be kept by the secretary, treasurer, and a member of the committee of control. The treasurer and collectors are obliged to present their accounts at any time on a requisition from the council or committee of control. The auditing of the accounts is the duty of the committee of control, who are to prepare a report on the condition of the society, which is to be presented at the opening of the meeting. One member of the committee is expected to assist at the meetings of the council, and has a voice in the deliberations. Three members of the committee retire at each quarterly assembly, and in order that there may be no collusion, they are not eligible for election during the ensuing quarter. A man cannot be elected on the committee of control unless he has been a member of the society for at least three months. The quarterly assemblies are to be held in January, April, July, and October.

The Syndical Chamber, as we have said, is charged with the defence of the interests of the members of the society. Whenever a dispute arises between a member and an employer, the syndics are to investigate the circumstances, and if they are able to arrive at the conclusion that his claim is well founded they are empowered to undertake the cause of the member. If the case has to go before the Tribunal of Commerce, which is a sort of court of appeal from the *Prud'hommes*, the chamber is to advance the sums requisite to pay the legal expenses, which are, however, to be proportionate to the amount of wages which may be claimed. Should the case be decided against the member, the loss of the fees is to fall upon the society. Besides the aid given in a law suit on a small scale, a sum of 40 frs. is available whenever a member suffers the loss of his tools in a fire, but on the understanding that it has to be repaid by instalments of not less than 5 frs. a month.

All complaints, claims, demands for inquiry, &c., are to be lodged in writing at the lodge of the society. They will receive attention according to the importance assigned to them by a council appointed for the purpose by the general assembly. Whenever it is considered necessary the council



may delegate two of its members to investigate the claims. The council can refuse support in any case which appears to be inequitable, or whenever the member is in fault. When the council has resolved to support the claim of a member he will receive an indemnity for the time he spends in pursuing his case which will only correspond with the wages recognised by the *Prud'hommes*, or, in other words, there is no inducement to be litigious. To gain these benefits it is necessary for a carpenter to be a member during a period of six months at least, and to have paid his subscriptions regularly. A workman who has been a member of a provincial society for that period, before joining the Paris society, is also entitled to support from the time of his admission.

Should a member fail to pay his subscription for three months in succession, and if the neglect is supposed to be culpable, he is to be considered as no longer a member of the society unless he completes his subscription before a resolution is taken. If he desires to be readmitted it will be necessary for him to pay the 3 frs. which are due, and a period of six months from his readmission must elapse before he is again in a position to demand the benefits of the society. Should a member leave Paris, he has to inform the council of his intention, in order that if, at any future time, he should return, he may not have to pay the admission fees, or wait the end of the six months' term. A member returning from military service is readmitted without paying the 3 frs. for arrears or 75 c. admission fee, provided that he had informed the council of his departure for the army, and inscribes his name within three months of his return to civil life.

The meetings of the council are held on Tuesday evenings from 8.30 p.m. to 10.30 p.m., and resolutions are not recognised unless more than one-half the members had been present when they were passed. In cases of urgency the secretary can convoke extraordinary meetings. The society is protected against usurpation of authority by the officers. The council is to account for its actions to the society by submitting the minutes to a general assembly. There are no sinecures. A member of council who fails to attend three successive meetings without giving sufficient reason for absence thereby forfeits his position. Members can be struck off the rolls if they break any of the statutes or bring the society into disrepute, but it is necessary that the demand for demission should be signed by at least ten members, and voted in a general assembly. The subscriptions paid by those members, as well as by members who have resigned or died, belong to the society, and cannot be made the subject of any claim.

A register containing the names and addresses of employers, which can be freely consulted by the members, is to be kept at the lodge. The meetings are to commence at the time fixed, whatever may be the number of members present. The secretary nominates the chairman for the day (who need not preside at two consecutive meetings), and the two assessors; the three are to be taken indiscriminately from among the members. The chairman is not to take a side, but only to make observations that will preserve good feeling in the discussion. The general assembly is the sovereign power of the society. It can deliberate even if it has not been attended by a majority of the enrolled members, provided that the meetings have been regular in form, and correspond with the programme indicated in the advertisement. Notices of motions and amendments are to be deposited on the table after the reading of the minutes, and they are to be read to the meeting by the chairman. A vote will then be taken as to whether the subjects require immediate discussion. The resolutions are binding on absent members. The precaution is taken in the statutes to announce that any member who presents himself in a condition that is likely to cause annoyance in the assembly will not be admitted. All the propositions which have been taken into consideration at a general assembly will be referred to the council by a committee who will be appointed for that purpose, and who will report to the following meeting. The advertisements of meetings are to be duly posted in the hall where the meeting is to take place. At the opening of the meeting some members will be nominated to act as stewards, and they will inform the chairman whenever a member desires to speak. The general meetings will be held in a central part of Paris; the five sections into which Paris is divided will meet in places most convenient. The council will be represented at the sectional meetings by a secretary having charge of the minutes, who will uphold, as far as possible, the propositions adopted by the council, a receiver

for the section, a receiver of entrance fees, and one of the members of the committee of control. The resolutions of sectional meetings are not authoritative until they are ratified in a general assembly, unless in a case where similar resolutions had been adopted in the five sections.

An office-bearer gains little but honour by his position, since all the functions of the syndical chamber are to be discharged without payment. When one of the members is employed in the service of the society during the ordinary hours of labour, he is to receive an indemnity that is equivalent to the normal rate of wages, with an addition of 10 per cent. per hour for the inconvenience of leaving work. As he is so often liable to be called away on official business, a member of council is not likely to be made a superintendent by a contractor. The funds of the society—that is, admission fees and monthly subscriptions—are, as we have seen, to be employed in vindicating the recognised rights of the members, afterwards in establishing drawing schools, a technical school for apprentices, and a library which is to be reserved specially for carpenters, in defraying the general expenses of the syndical chamber, and in giving aid towards the setting up of syndical workshops. There are some members who believe that the last named is the most important application. When the money in the chest exceeds 500 frs., the surplus is to be invested by the council acting on the advice of a general assembly.

The founders of the society have no faith in their own infallibility, for it is a principle that the statutes are always open to amendment. A proposal for a modification of them is to be signed by at least fifteen members, who have belonged to the society for six months. It will be submitted to the consideration of a committee, and afterwards discussed at the meeting which follows the presentation of their report. The members are understood from the time of election to have undertaken to aid in the progress and development of the society by punctual payment of the subscriptions and by propagandism in its behalf among their friends. The carrying out of the statutes is confided to all the members individually, and they can all do something to promote the success of the association.

In case of the death of one of the members a deputation of ten members belonging to his section will be convoked by the receiver in order to assist at the obsequies—that is, if the family have given timely notice. The council is to be represented by a member at every burial. If a member who has been summoned does not assist at the burial, he will have to pay a fine of 5 frs., unless he can satisfactorily prove that he was ill or out of Paris at the time. A wreath of the value of 10 frs. will be placed on the coffin, with the inscription "*Chambre Syndicale des Menuisiers*."

## THE INTERNATIONAL HEALTH EXHIBITION.

IT is gratifying to find that the Health Exhibition is becoming more attractive. With the exception of the Chinese court, it may be said to be complete. The Prince of Wales inaugurated the work of the juries on Tuesday, and it may therefore be assumed that the exhibits are in their places. We continue our observations on the objects which are likely to have most interest for our readers.

*Messrs. James Stiff & Sons.*

Stands 213, 476, and 807 are occupied by Messrs. JAMES STIFF & SONS, the London Potteries, Lambeth. The pottery-ware turned out at these works is of such variety that it enters into three different classes, which accounts for their occupying the above stands, which are situated respectively in the south gallery, the south annexe, and the east central gallery. In the first-mentioned position the exhibit is confined to jars and such like utensils for domestic use, jars, bottles, and containers for wines, spirits, or beer, and an extensive assortment of ware for laboratory purposes, including distilling apparatus, cells for electric batteries, &c., all of which give evidence of fine quality of material and first-rate workmanship. At their Stand No. 476 in the south annexe they display a collection of the sanitary ware for which they are justly noted. The space here allotted the firm is somewhat cramped, but the goods, being arranged on shelves built up tier above tier, are seen to good advantage, and prove to be an excellent assortment. The exhibit comprises a variety of water-filters, kitchen, housemaids', and slop sinks, closet-pans, drain-pipes, with their connections of junctions, bends, &c., and several patent traps of the most approved patterns, including Weatherly's waste-water trap, Lovegrove's inspection pipes, Bevan's patent traps, &c., and last, but not least, the "Weaver"

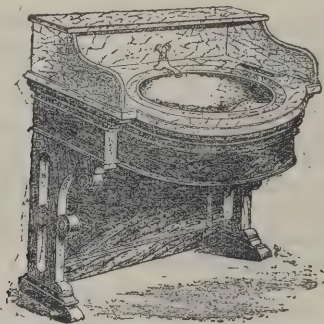


trap, one of the most simple and effectual of its kind, and which has been the object of much well-merited favour. The principal features at Stand 807 are the specimens of architectural terracotta, which can scarcely be too highly commended, though the fireproof terra-cotta steps, smoke-curing chimneypots, ventilating bricks, and damp-proof courses here shown are well worth notice, and, in common with the other articles sent by this firm, form a most useful and interesting contribution to the exhibition.

*Mr. George Jennings.*

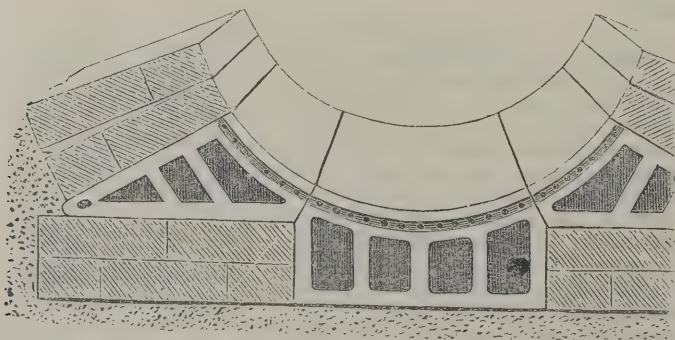
At Stands No. 522 east annexe and No. 927 east central gallery, Mr. GEORGE JENNINGS, Stangate, S.E., displays a very creditable assortment of the inventions for which he is famous. That this firm has done more than any other to perfect our sanitary arrangements, whether of a public or private character—that it has been, in fact, the pioneer in this science—scarcely needs corroboration from us; and, in making a tour of this section, one instinctively pulls up on alighting on this familiar name, and is not satisfied until a close inspection has been made of the appliances shown. The former of these stands is replete with the patent urinals and water-closets that have obtained such notoriety, and comprise the double-seated valve water-closet, in which the common evils of noise, complication of parts, and the displacement of impure air are effectually overcome; the patent valve closet and trap, in one piece of earthenware, which is also noiseless in action and so efficient as at all times to regulate the quantity of water necessary to the basin, and so render overflowing an impossibility; the patent “trapless” valve water-closets, whose salient features are due to the patent flexible-seated ball-trap; the patent improved Bramah valve closet and trap, especially adapted for Continental cities and places where the water supply is limited, as from the form of the basin only a small quantity of water is required for flushing and charging purposes.

Passing on to Mr. Jennings's stand in the east central gallery, there is to be seen a varied assortment of his other equally useful and admirable appliances, such as electrical bells, burglar alarms, lightning conductors, &c., enamelled copper baths fitted complete, improvements in valves and water fittings, kitchen, scullery, and slop sinks in enamelled slate, sinks for artisans' dwellings, improved patent lavatories, and patent tip-up and lift-out lavatory basins, patent arrangement for warming and ventilation, and minor drainage accessories, including patent traps, gullies, and other connections. Of the lavatories shown we are enabled to give an illus-



tration of one well worth attention. It is fitted with patent “tip-up” and “lift-out” basin, and other recent improvements; there is nothing to harbour dust or dirt closed in underneath, and the form enables one to sit close up to it in a convenient position for a shampoo.

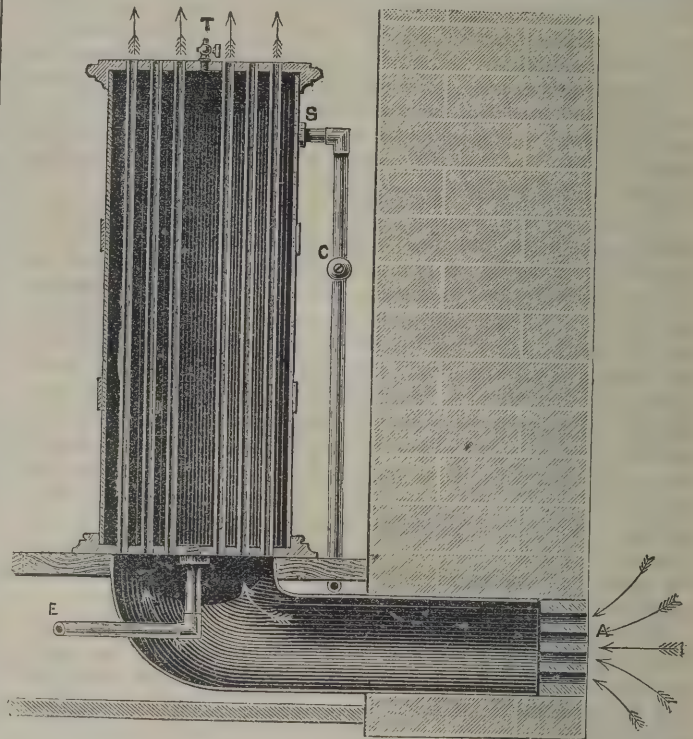
Our next sketch depicts Mr. Jennings's patented improvements in the construction of sewer inverts. A glance at the drawing will



readily show wherein lies their superiority over the stoneware invert blocks hitherto used. The principal drawback to the latter has been on account of the very limited glazed surface presented to the flow of sewage, which, in the one now before us, is simply and effectually overcome by building up an invert partly of brick and partly of stoneware, and so the desideratum of a well constructed and strong base with a broad glazed surface is secured at a minimum cost, while they are capable of application to, almost

any radii, breadth of surface, &c., for the various sections engineers require.

Mr. Jennings's arrangement for warming and ventilating must not be passed over. The apparatus, as a glance at the illustration will show, consists of an upright cylinder, containing a number of



tubes, communicating with the external air by means of a passage formed through the wall. If steam or hot water be admitted to the cylinder a continuous supply of warm fresh air is drawn into the room, its velocity being determined by regulating the stop-cock C. The system has been applied to many public buildings, and the testimony received as to its efficiency is all that can be desired. It will be seen that there is much of interest in this collection, and such as will well repay a visit.

*Messrs. Cliff & Sons.*

At the head of the east central gallery we find the exhibit of Messrs. CLIFF & SONS, of Wortley, Leeds, whose collection of decorative faience made in the busy Yorkshire city is, as usual, of a most interesting character. There is a difference to be noted between the productions of this firm and those who are merely tile makers, as Messrs. Cliff's decorative material partakes of the character of bricks in substance, and so forms a portion of the walls wherever it is employed, instead of being merely tiled-laid on the main structure. The advantages obtained by this mode of treating the decorative feature must be palpable to all, for instead of a thin tile, that sooner or later gives way, we have decorative bricks that can only be destroyed with the wall itself. An example of this class of work will be seen in two large circular-headed panels representing the apple blossom, the pattern being slightly raised, and which are facsimiles of some recently erected at a house in South Audley Street. A façade, consisting of three openings for the side of a kitchen in glazed bricks of buff-brown and low-toned greens, which have a clean and pleasing appearance, is to be commended from a sanitary point. This firm have always made a speciality of finely-decorated bricks, and some of the specimens exhibited here have all the appearance of china. Amongst the designs on a single brick may be mentioned a sketch of Haddon Hall, which, as regards treatment, may vie with many paintings on canvas. There are in addition sundry other decorative examples consisting of dados and other wall coverings, a handsome mantelpiece and grate front, kerbs, &c. A new exterior decorative ware, salt-glazed, is shown, looking as hard as adamant, that can be made in any design, and is calculated to resist the action of any weather or atmosphere, and is a feature that may be used to advantage in better-class buildings. Messrs. Cliff & Sons are also well to the front in baths, and their sinks, mangers, washing-tubs (if such a term may be applied to clay ware) are excellent specimens; and we understand they are largely exported to America. They are all made in one piece, and thickly coated with a white glaze. The baths are also in one piece, of good shape, and may be coloured and decorated to any extent. One is exhibited handsomely mounted in mahogany, with faience panels, surmounted along the entire length of one side with a noble bevelled-edged looking-glass in mahogany frame. Another, unmounted, is shown in pink, with a bordering to represent tiles all worked out in the decoration. Though not so extensive in bulk as the exhibits of one or two of their competitors, Messrs. Cliff's collection loses



nothing by comparison. In the south annexe Messrs. Cliff & Sons have another stand devoted exclusively to their salt-glazed drain-pipes and other sanitary ware, of which, as is well known, they are extensive and reliable makers.

*Messrs. W. A. & S. Smee.*

At Stand 401 Messrs. W. A. & S. SMEE, of Finsbury Pavement, E.C., have fitted up a luxurious bedroom and boudoir, designed and arranged by Mr. Alfred Smee. The bedroom furniture approaches somewhat to the Chippendale, and contains a very handsome brass bedstead, a chest of drawers, with linen-cupboards above, made of walnut with rosewood facings, and the dressing-table, of the same woods, holds a bold swing glass with broad bevelled edges and drawers to the ground. On each side of the chest of drawers is a single washstand fitted for hot and cold water service, flanked above with a panelling of Sienna marble, the towel-rollers being made to slide in and out, and when not in use they are out of sight. A quaint fireplace occupies one end of the room, fitted with cabinets over the mantelpiece and a deep recess in the centre, on which ornaments, &c., may be placed. On either side of the grate a "settle" seat is fixed, comfortably upholstered, and presenting an inviting air. The walls are covered in a neutral green tint, with a cornice of walnut wood, and above that a deep frieze of a plain lemon-coloured tint. A parquet with eastern rugs and some comfortable chairs are the remaining principal embellishments. The boudoir is also a very comfortable apartment; a large "settle" seat with return end, to which curtains are affixed, is the largest piece of furniture, and the return end can be removed from it, which enables the whole or either portion to be removed to any part of the room. The woodwork of all the furniture is of an enamelled ivory tint, and consequently washable. The grate and mantelpiece are made to project into the apartment, and opposite this at the other end of the room is a pretty cabinet with canopy, to match the one over the grate. The window is arranged as a little alcove, and here again we meet with cosy "settle" seats on either side, a receptacle for flowers occupying the central portion of the window. The walls are papered in blue, comprising two colours. There is no fully defined cornice, but the spring of the ceiling may be said to form one, and is papered with a light blue pattern on white ground. The only fault we find with the general appearance is that the large "settle" has too stiff an appearance with it, and has more the appearance of a piece of furniture adapted for an invalid room than for a lady's morning reception apartment.

*Mr. Archibald Dawnay.*

At 809, the Stand of Mr. ARCHIBALD DAWNAY, King William Street, E.C., are specimens that anyone can examine with advantage, as the principles adopted by him for the construction of private or public buildings, so as to render them fireproof, cannot be too widely known. The exhibit comprises sections of rolled iron joists and girders, and sections of angles, channels, tees, &c., in a variety of sizes such as are being constantly used for his fireproof floors and roofs. A section or portion of a solid fireproof floor, also shown, gives a clear idea of the system. It consists of an encased girder, and is finished externally with McLean's patent cement tiles. In a word, the principle consists in embedding either girders, stanchions, columns, &c., in cement concrete, which renders them indestructible by fire. Among the other advantages of floors so constructed may be mentioned the following—they have no lateral thrust or expansion, and they give the maximum strength with the minimum thickness. The ceilings are quite flat and ready for plastering without laths, and finally may be inserted in place of existing wood floors. It is needless to mention how particularly suitable they are for premises where manufactures of an inflammable nature are carried on, and any who contemplate erecting buildings for such purposes would do well to give Mr. Dawnay's system a trial.

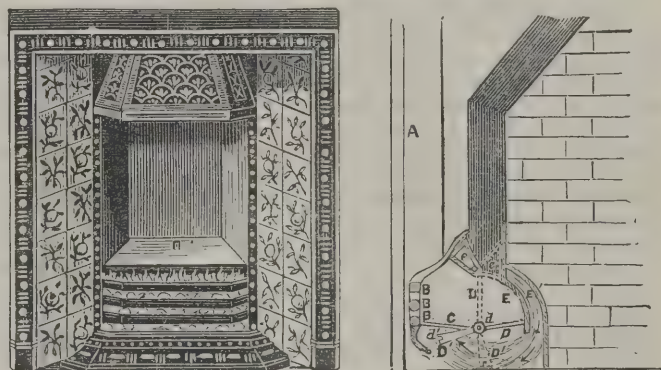
*Mr. W. H. Bateman.*

At Stand No. 828 Mr. W. H. BATEMAN, 90 Cannon Street, E.C., is exhibiting Sir W. Burnett's patents for the preservation of timber, canvas, cordage, &c., from dry rot, mildew, or premature decay, and likewise for rendering wood unflammable. There is nothing new in these various processes, they having been shown and awarded a prize medal in 1851; but, nevertheless, a few words as to some of their advantages will not be out of place. The fluid hardens and improves the texture of wood, and enters into such permanent chemical combination with the fibre that no amount of washing or boiling in water will remove the chemical compound so formed. It also prevents the adherence of animal and vegetable parasites, and the attacks in India of white ants and other insects. It renders the wood, as we have already remarked, perfectly unflammable, and so makes it very suitable for applying to the planking of railway bridges, sheds, &c. The timber can be prepared at all times, whether wet or dry, green or seasoned, with the certainty of the preservative fluid penetrating to the centre. Applied to canvas, cordage, &c., it renders them more pliable without discolouring them, and, as is the case with wood, washing or boiling in water will not destroy the chemical combination that has taken place with the fibres. Other solutions, such as Baker's

tinning and soldering preparation, and a highly concentrated disinfecting fluid that is quite colourless, and will not stain the most delicate fabrics, are also exhibited at this stand, and are well worth attention.

*Mr. G. H. Thompson.*

In the eastern gallery, amongst the stoves and grates in action, will be found the patent open smokeless grates and kitchen ranges, the invention of Mr. THOMPSON, of Marquess Road, Canonbury. Although not connected with this industry, Mr. Thompson is engaged in an occupation in which large quantities of fuel are daily burnt, and his attention has for a long time been devoted to the economisation of fuel and the consumption of smoke. At the Smoke Abatement Exhibition of 1881-82 he exhibited an open grate; but his ideas were not then so perfected as they are now, and the grates shown here are the results of his experiments made in the interim. There is novelty in their constructive parts and simplicity in the working arrangements, and we have not the slightest doubt that the invention will receive careful consideration at the hands of the jurors when making their examinations. The prevention of smoke in open grates is a problem very difficult to solve, and it is a well-grounded opinion that it can never be entirely eliminated so long as we persist in using open fireplaces. That it can be materially reduced, however, and to a mere minimum, Mr. Thompson conclusively shows us, while retaining all the gratification the Englishman derives from a bright open fire. Mr. Thompson acts upon the assumption of the late Dr. Siemens and others, that coal should never be used in its raw state, that to do so is wasteful, extravagant, and injurious to health and our surroundings. Attempts have been made by other inventors to carry out this idea, but for domestic fireplaces we have not seen anything so effective as the plan here adopted, and two of the advantages are that it does not increase the size of the grate or add to its cost, as an ordinary register can be sold at a trifle over that of the commonest made. We subjoin illustrations of the grate in section and elevation, and it will be seen by the latter how little it differs in appearance from the ordinary kinds. The solid plate at the back represents the cover of a chamber forming a portion of the fire-basket, which communicates at the bottom with the front part in which the fire burns. To feed the fire this lid is lifted forward, and the coal is placed in it. Here it is coked, so to speak, before being introduced into the burning mass, and the gases or hydro-carbons have to pass downwards into the ashpit, where they mix with the heated oxygen, and pass upwards through the fire, the access to the chimney being the usual one directly over the fire. This coking-box may be fairly termed a combustion chamber,



and the admission of the prepared fuel to the fire is effected in an ingenious automatic manner. The receptacle on which the coal is placed is a grating poised in the centre and weighted at its lower end; consequently, if ever empty, the weight causes it to assume an almost perpendicular form; but as this is never the case when a fire is in the grate, there is always room to put in fresh fuel; but the action of the weight being always to fall, it is constantly exerting this influence upon the coal which it imperceptibly forces forward into the fire. Robbed by this time of all its deleterious compounds, it enters upon its functions in the fire as what may be termed a semi-coke form, and the result is always a clear bright fire devoid of smoke. If the visitor will walk outside into the open air and look up at Mr. Thompson's smoke-pipes he will never see anything worse than a thin light vapour being given off, excepting when the lid of the coking-chamber is opened to show the arrangements to visitors, when perhaps a little smoke may be seen to pass out. The security from smoke thus rests with the fuel always being put in its proper receptacle, and as this is little or no more trouble than throwing it direct on the top of the fire, we can imagine nothing more absurd than a person adopting these grates and then treating them in such a manner. Presuming that a careless servant, in the absence of her mistress or master, was to feed the fire in the ordinary way, the result would be detected immediately on their return to the room. Mr. Thompson treats open and close fire kitchen ranges in the same way, and this should prove a boon to the cook that she will not be slow to avail herself of, for it will always give her a clear bright fire instead of (often-



times) a smoky one, that sours her temper and gives her unnecessary trouble. Making due allowance for any objections that sceptics may raise, we consider that Mr. Thompson has done a great deal towards solving a difficult problem.

*Mr. J. Ebner.*

At Stand 866, Mr. J. Ebner, 51 Clerkenwell Road, E.C., contributes a very unique collection of mosaic decorations suitable for cathedrals and churches, plainer or simpler examples of mosaic work for floors of ordinary buildings, and some very elegant designs in parqueterie. Though it is almost impossible to select distinctive features in speaking of the above kinds of work, to call the attention of the reader to, we have no hesitation in saying that the whole of the specimens here shown, both as regards the mosaic and the parquet work, represent very considerable artistic feeling, and are of the first order of merit, while the workmanship and finish leave nothing to be desired. Some slabs of "marble concrete" are also shown in various combinations of colours, which are almost equal in appearance to regularly-laid mosaic work, but the price is very much lower.

*Mr. G. Edwards.*

Stand 398 is occupied by Mr. GEORGE EDWARDS, 68 Brompton Road, who shows his patent fittings for opening, closing, and fastening window-sashes, especially those of a heavy description. They have been some years before the public, but we believe there is nothing at present that excels them for their particular purpose.

*Mr. J. D. Tucker.*

At Stand 397 is to be seen another spécialité in window sashes and frames manufactured by Mr. J. D. TUCKER, Bromley, Kent. They have the appellation of "water-tight," and it is claimed for them that they effectually exclude all draughts, dust, wet, &c., and when their construction is closely looked into, there is little doubt but what they will do so. Indiarubber cushions are fixed in the top, bottom, and meeting rails of the sashes, which fit into hollows or grooves sunk in the window head and sills; the meeting rails are similarly fitted. The runners or parting beads are screwed to the pulley stiles, and so constructed as to fit into the sashes, and thus making the window, to all intents and purposes, air-tight. Mr. Tucker supplies these sashes and frames in all sizes and shapes, and in various woods; and first-class buildings, would be much improved if they were more generally fitted with them.

*Mr. W. J. Penny.*

At No. 396 Mr. W. J. PENNY, of 11 Sidmouth Street, Gray's Inn Road, shows his double-action window sash and frame, which possesses unique and important features. The remark that has been made of some of the exhibits, that it requires a considerable stretch of the imagination to see their connection even in the remotest and most indirect way with health, cannot in the least degree be said of this invention, for it provides a simple and easy remedy for the prevention of injurious accidents and loss of life of a by no means uncommon source. The object of the patent is to enable both sides of ordinary vertical sashes to be cleaned from the inside of the room, or to facilitate their removal for the purpose of admitting large articles of furniture. The *modus operandi*, which we believe is the simplest in the market, is as follows:—The bead on one side is hinged and kept in its proper position by one thumb-screw; when it is required to remove the lower sash, this bead is turned back, and the sash opens into the room with a wicket motion; the bead that divides the two sashes is likewise hinged, and the upper sash opens into the room in the same manner. It will thus be seen to possess very important advantages, and, if builders were compelled to use this patent for all windows above the ground floor, many lives would be annually saved.

### LOCAL SURVEYORS.

THE following examination papers were given to the candidates at the examination of local surveyors, held at the Sanitary Institute on the 5th inst. :—

What public laws exist as to the construction of new houses and buildings in respect of height, thickness of walls, general curtilage, and outbuildings?

What legal powers can a local surveyor use to compel the laying on of a proper supply of water? In the event of his reporting to his authority that entry for this purpose has been refused, how would he substantiate his report before the magistrate?

Describe the powers exercisable by the surveyor of a local authority with respect to ventilation of—(a) Buildings, dwelling-houses, and manufactories; (b) Sewers, private and public. What provisions ought to exist to carry out ventilation in each of these?

How would you calculate the dimensions of an outfall sewer for a population of 15,000 people, the ground affording a gradient of 1 in 600?

Under what circumstances would you adopt a glazed earthenware pipe sewer in preference to one of brick? How would you

form a brick sewer in a running quicksand at a depth of, say, 12 feet?

Sketch a ventilating chamber and a man-hole, and also a means of flushing a pipe sewer.

Supposing that a new water supply is needed for your district, how would you ascertain the sufficiency or otherwise of any adjacent brook or river to supply the necessary quantity?

What is meant by hard water? What sources usually furnish it? and what is meant by total hardness and by permanent hardness?

What are the most common causes of pollution of water in wells, in water-butts, and in cisterns inside houses? and what steps would you take to prevent pollution in each case?

What amount of fresh air must be supplied per hour for each individual for health? To what extent and in what manner does the quantity depend on the size of the room in relation to the number of occupants? Explain by one example how your result is arrived at.

Draw up a short set of by-laws for the proper management of a common lodging-house.

Describe the manner in which you would construct a macadamised road upon newly filled up ground. Give sketches of the construction of a macadamised road, and show the form of the surface and the falls from crown to channel.

### THE FORESTRY EXHIBITION, EDINBURGH.

THE International Forestry Exhibition, which is to be opened at Edinburgh on July 1 next, gives promise of being a very successful affair. For its inception credit is due to the Scottish Arboricultural Society, whose president and office-bearers have pushed it forward in a most hearty manner; though the exhibition arrangements have since been worked out by a committee upon which the Highland and Agricultural Society and one or two other public bodies are represented. A forestry exhibition, says the *Scotsman*, is altogether a novelty in this country, and it remains to be seen whether out of woodland products as pleasing and popular a show can be organised as was done two years ago in connection with sea and river fisheries. The Forestry Committee, however, can congratulate themselves so far that their scheme of exhibition has commended itself most unmistakably not only in this but in foreign countries, so that literally from "China to Peru" exhibits are now on their way to Edinburgh, or have already arrived, many of which are said to be of a very interesting description. For the housing of the exhibition a spacious, and in many respects handsome, wooden building has been erected, from plans by Mr. Morham, city architect, in the park in front of Donaldson's Hospital, at the west end of the city. The building is all but completed, and appears in every way to be well adapted to the purposes for which it is intended. The main building consists of a long avenue or nave, 630 feet in length by 50 feet in width, which is intersected near each end and in the centre by transepts of the same width. On the south side the depth of each of the transepts is 74 feet, and on the north side 64 feet—the latter being raised above the central hall by several steps. Over the intersection of the central transept with the main building is a lofty dome, surmounted by a flagstaff; while at the corresponding intersection of each of the end transepts there is an octagonal pavilion roof. In the interior, the roof of the rest of the building has been broken up by the introduction of circular ribbed couples, which are being painted light blue, with good effect. The building is lighted by means of lying lights along the upper half of the roof, and windows in the gables of the nave and transepts; while for ventilation, openings are left along the ridge. In consequence of the recent large demand for space on the part of the Japanese Government, it has been found necessary to erect three large annexes, which open off the north transepts. The central annexe is 200 feet long, while those at each end are 150 feet. All are 31 feet in width, and finished in the same manner as the main building. Where not of glass, the outside of the roof of the building has been covered with Gray's patent felt. The entrance to the exhibition will be by the westmost gate of Donaldson's Hospital, a short distance within which has been erected a handsome Swiss porch, with triple arcading, projecting roof, and other ornamental features. This opens into a covered corridor, 25 feet in width, which follows the line of the present carriage-way for about 160 feet, then turns off at right angles, and by two short flights of steps gives admission to the exhibition buildings. The space between the porch and the gate is to be paved with granolithic slabs; three long steps of the same material lead up to the porch, the landing of which is laid with new granolithic coloured tiles—the granolithic work being performed gratuitously by Messrs. Stuart & Co., Edinburgh, the patentees. Opening off the corridor will be postal and telegraphic offices, left luggage rooms, railway and police offices, &c.; while on each side of the landing of the stair leading from the corridor to the main building is respectively a reception room and a jurors' room, the former of which is being elegantly fitted up by Messrs. Cranston & Elliot free of charge. The stalls—10 feet wide—in nave and transept will be arranged along the walls, and there will be a central table 7 feet 6 inches in width, on which



goods will also be exhibited. Two wide passages will be left as a promenade for visitors. It may be said that the south central transept has been allotted to the Indian Government for their exhibits, and that already part of the collection has arrived, though it has not yet been unpacked. Under the central dome a fountain is in course of erection, the lower basin of which is outlined with eight semicircles. Several figures will support a small central basin, into which water will play. Around the margin of the fountain groups of plants will be disposed. In the evening the exhibition will be lighted by means of electricity, the arc light being the system employed. Electric lamps will be hung on lofty poles outside for the lighting up of the grounds. In rear of the main building are two refreshment rooms—each nearly 100 feet in length by 20 feet in width—alongside of which are two fireproof kitchens, built of brick with corrugated iron roofs. All the cooking will be done by means of gas, so as to minimise risk from fire. There are abundant means of exit from the buildings to the grounds, there being a door in the gable in each of the south transepts and two doors in each of the annexes; and the water and sanitary arrangements have also been well attended to. The cost of the exhibition buildings will be over 5,000*l*. On the west side of Donaldson's Hospital grounds is a park of seven or eight acres, which has been leased for exhibition purposes and laid out in plots of various sizes with broad, well-made walks between. Part of this ground will be allotted to nurserymen and others for the display of specimen trees; horticultural builders with greenhouses and conservatories will occupy another portion; while dotted about will be several buildings of an interesting nature, including a model of the Queen's Highland chalet, and pretty cottages from Switzerland, California, Canada, and other foreign parts. Along the east side of this park will be a range of sheds for the electric light dynamos and engines; on the north side a covered building in which machinery for preparing wood will be shown in motion; and on the west, stores for empty packing cases. On the side next the exhibition, and just off the main corridor, a house with a pretty Swiss front has been erected for the accommodation of the executive committee, the secretary, and other officials; and in the centre of the grounds there is a refreshment room. Possibly, also, a band-stand may be put up. One of the attractions of the exhibition will be an electrical railway, which is to be laid down on the north side of the exhibition buildings. Its length will be about 700 feet, and frequent trips in the cars will be daily made during the time the exhibition is open. Other novelties are spoken of for the outside, which will add to the attractiveness of the exhibition as a summer promenade for visitors. The whole of the buildings, it should be said, have been erected in a very substantial and expeditious manner by Messrs. W. Beattie & Son, Fountainbridge.

## THE ABBEYS OF JEDBURGH AND KELSO.

ON Saturday last the members of the Edinburgh Architectural Association joined in their annual excursion, when Jedburgh Abbey, Kelso Abbey, and Floors Castle were visited, under the guidance of Mr. John M'Lachlan, architect. At Jedburgh Abbey the historical and architectural points of interest connected with the fine old building were described. The site is a richly-wooded terrace on the banks of the Jed, and is one of the most attractive in the district. Jedburgh Abbey, said Mr. M'Lachlan, was founded and endowed by David I. in 1118 for Augustine friars from a large establishment in France. It was not till the close of the century that the prior of Jedburgh received the title of abbot—in the year 1174. Probably the most notable historical event connected with Jedburgh was the marriage of the ill-starred King Alexander III., in 1285, within its walls, with Ioland, daughter of the Count of Dreux. Jedburgh, like the other religious houses on the Borders, suffered severely during the unsettled times of the War of Independence. Notwithstanding all vicissitudes, however, the brotherhood waxed rich and powerful, had dependencies in various parts of Scotland, and acquired large parts of land throughout Tweeddale. There was nothing very remarkable in the history of the abbey from the War of Independence down to Lord Hertford's invasion in the reign of Queen Mary. In the month of June 1545 the abbey was attacked by the English, and, as there were none but burghers and ecclesiastics to defend it, the place capitulated, and the abbey was pillaged. The building seemed never to have been restored after the ruin thus brought upon it. From an architectural point of view, Jedburgh Abbey was interesting from its mixed character. The length of the nave is 130 feet, and the height from the floor to the wall head 50 feet. The style of the architecture is transition from Norman to first Pointed, and, though many of the features are truly Norman, such grace and lightness are exhibited in every part as are seldom seen in buildings even of two centuries later. The flowered capitals, by which the Norman forms are made to assume all the airiness and richness of the more decorated periods, are perhaps better developed in the ruins of Jedburgh than at either Kelso or Coldringham, where the same characteristics occur. To show the proportions of the nave, the whole of the moulded base

of the north aisle wall has been restored, as also a considerable portion of the south aisle wall. There has been inserted in the latter a facsimile of the beautiful cloister doorway, which, during recent years, has become very much decayed. This doorway has long been looked upon as unique, and the late Sir Gilbert Scott, alluding to this and the great western doorway, said they "are two of the most exquisite gems of architectural art in this island." The new doorway was erected in accordance with drawings by Dr. Rowand Anderson, of Edinburgh, under whose directions all the recent alterations on the abbey have been carried out. The style of this doorway, like that of the nave, is late Norman, or Norman transition, of which it is a very remarkable example. The north transept, the only one remaining entire, is of the Gothic architecture of the fifteenth century. Above the great north window are the arms of the Kerrs, the bailies of the abbey, whose burial-place is in this part of the church. The south, or cloister, doorway, between the central tower and Lord Campbell's vault, is a fine specimen of Norman transition character, and belongs to about the end of the twelfth century. The lower part of the choir is also Norman, like the transept, but the eastern extremity or chancel is entirely destroyed. The tower, 30 feet square and 120 feet high, rises upon four circular arches, and it may be ascended by a narrow stair in the south-east corner. The two piers of the tower towards the north are Norman in style, and belong to the early part of the twelfth century; while the south piers and the greater portion of the tower were built in the latter part of the fifteenth century.

The history of Kelso Abbey, Mr. M'Lachlan pointed out, is similar in many respects to that of Jedburgh. It was founded by the same monarch, had a similarly disturbed history, and was unroofed and rendered useless for occupation about the same time as Jedburgh. It cannot, he remarked, be made too plain to the people who persist in laying the devastation and ruin which came to our ecclesiastical structures in the sixteenth century at the door of John Knox, that Knox had nothing to do with the spoiling and destruction of these buildings. Both Jedburgh and Kelso Abbeys were wrecked and destroyed by the Earl of Hertford in his raid in 1545. Kelso Abbey was founded by David I. for the order called Tironensis, a branch of the Benedictines, whose chief seat was Tiron, in Picardy. Speaking of the architectural arrangement of the building, Mr. M'Lachlan said it would be observed that it was of the form of a Latin cross, but instead of the long leg of the cross lying towards the west, and the short head of the cross being towards the east, with the altar there, the arrangement was entirely reversed, and the long end of the cross, or what was usually the nave, was towards the east, and the short end, or altar end, was to the west. This was such an unusual arrangement that one was driven to look into the matter for an explanation. To ancient church builders a prime consideration was that the altar end should be to the east. Here apparently, if the short head of the cross was to be taken as a guide, it was towards the west. Might it not be that the relative length of the legs of the cross had been reversed for good and sufficient reasons? The chancel or choir of the church was occupied by the servants or priests of the body in whose honour the church was built, and the nave or west end was for the use of the congregation. Might it not be that in this case, at Kelso, the clerical brethren were much more numerous than the lay element, and required more accommodation? This seemed natural in view of the semi-secular nature of the Benedictine brotherhood. If the population of the locality 400 years ago were primarily clerical—with a dash of the agricultural, artist, and man of business in their training—they would all go into the choir, or privileged part of the church, and that part would require to be the most commodious. Hence, possibly, the large chancel end of this building. The period of the architecture as evinced by its character, the mixture of the round and pointed, was here so close that while the great supporting arches of the tower were pointed—probably from its being held to be the stronger form—the upper tiers of small windows retain the round Norman shape. The porch has often been adduced as a striking example of the capabilities of Norman architecture. Two distinct types of treatment are noticeable throughout the building—the one heavy, massive, dignified, and round, the other foliated, light moulded, and graceful. Two more complete and beautiful examples of the interesting period of transition from the massive and strong Norman to the graceful Early English than the two edifices, Jedburgh and Kelso Abbey, it would be impossible for architects to see.

On the motion of Mr. M'Gibbon, the president, Mr. M'Lachlan was accorded a cordial vote of thanks. The party also visited Floors Castle, the princely residence of the Duke of Roxburghe. The building was originally designed by Sir John Vanbrugh, the architect of Blenheim, but it was remodelled by Playfair in 1838. The park—with its old and noble trees and its celebrated gardens—were greatly admired, and from the ridge of the terrace behind the castle the party had an opportunity of enjoying the picturesque view, which embraces the town of Kelso, the winding shining water of the Tweed, and the richly wooded lands that lie beyond. The party dined early in the evening in the Cross Keys Hotel, Kelso—Mr. M'Gibbon presiding, and Mr. M'Lachlan occupying the vice-chair.



## NOTES AND COMMENTS.

THE formation of a syndicate to provide funds for the purchase of objects from the FOUNTAINE collection is an experiment that will be watched with interest. In this case the sum to be expended was not to exceed 12,000*l.*, but hereafter at other sales a wider limit may be prescribed. It is an ingenious way of bringing pressure to bear on a Government, but the members of the syndicate would do better if they did not ask to be recouped. The Exchequer does not always abound with cash, and it is no secret that the late Earl of BEACONSFIELD, in the plenitude of his power, was unable to obtain means to purchase collections on which he had set his heart. If the sale of a great collection could be foreseen, it might be possible to make arrangements; but, speaking generally, it is always inconvenient to obtain public money for such purposes. Besides, it is not always evident that costly objects are made objects of study. Supposing the FOUNTAINE collection in its entirety had been purchased for the British Museum, what percentage would be added to the visitors? People who attend auction-rooms during the season are not often seen in public galleries.

THE syndicate, acting on the advice of Mr. A. W. FRANKS and Mr. J. C. ROBINSON, have succeeded in purchasing several examples, which will be exhibited during next week at the British Museum. One is an Urbino oval dish, measuring 26½ inches by 20½, and on which is a representation of the Israelites gathering manna. It cost 1,333*l.* 10*s.* A pair of candlesticks of Limoges enamel by PIERRE RAYMOND, were bought for 1,218*l.* For a dish that is believed to be Castel Durante ware 378*l.* was paid, and 252*l.* for an Urbino dish. A dish which is supposed to be the work of JEAN PIERICAUD the Younger was purchased for 766*l.* 10*s.*, and one by PIERRE RAYMOND for 388*l.* 10*s.* There may have been other acquisitions by the syndicate, although not so described in the auction room.

THE town of Belfast seems to advance at a rate that forms a contrast to the remainder of Ireland. Within the last quarter of a century the number of houses has increased 113 per cent., and the valuation 114 per cent. In the short period of five years the houses have increased 20 per cent. and the valuation 12 per cent., or in other words, the valuation of Belfast has increased 80,000*l.* a year, and a million and a half of money has been invested in building. The figures are remarkable, and are taken from a speech delivered by the Lord Lieutenant. It has been also ascertained that on an average only five people inhabit a house in Belfast, whereas in the other large Irish towns the average is nine. The cause of the prosperity of Belfast is attributable to many reasons. It is the centre of a manufacturing district instead of an agricultural district. The town and waterway were laid out by Sir CHARLES LANYON on lines that allowed of expansion. Lastly, the difficulties of the late Marquis of DONEGAL enabled the inhabitants to purchase their tenements, and there is a greater number of freeholds in Belfast than in Dublin.

A COLLECTION of three hundred drawings by Mr. DU MAURIER is now on view in the gallery of the Fine Art Society. They will be familiar to visitors as they have been reproduced from week to week in *Punch*. But however dexterous a wood-engraver may be, it often happens that there are touches in a drawing which he fails to translate with spirit, and especially when he is working against time. This is the case with Mr. DU MAURIER's drawings, and the visitor will find that the sketches are superior to the woodcuts. It is difficult to say whether the grace of the figures—especially of the ladies, children, and young men—or the adaptive power of the artist is the more remarkable. Mr. DU MAURIER is the first foreigner who has represented English people truthfully. GAVARNI's sketches of London life are Parisian, and although GUSTAVE DORÉ was an admirer of everything English, yet amidst all his illustrations for the big book on London it is impossible to discover one figure that is typical. There are crowds of strong and ugly people, and that is all. Mr. DU MAURIER appeared at a time when it was considered hopeless to expect a successor to JOHN LEECH. Yet he was able to convince the public in a few months that he was competent to delineate the most delicate traits of English life. Mr. DU MAURIER's art has its shortcomings; he is not so successful as Mr. KEENE in representing middle-class folks, and he has not

the pathos of LEECH, but in his own line he has produced work which will always give delight.

AN American Exhibition is to be held in London in 1886. The project is being organised by General C. B. NORTON, who has filled the office of commissioner in several exhibitions. He has received the support of influential manufacturers and producers. It is said that America has not been adequately represented in European international exhibitions, and it is expected that the proposed exhibition will do much for American trade. The American artists in Paris, who form an influential body, have promised their support to the scheme. There is to be a large building, in which white and coloured American workmen will be engaged on their respective handicrafts.

ACCORDING to the latest accounts the works at the church of Montmartre are making slow progress. The scaffolding has that indescribable appearance which marks buildings which are at a standstill. As the ground is of large area, the workmen appear fewer than they are. The crypt has been partly used for some time; the porch is complete, but the masonry is not much higher than the sills of the windows. Unless more men can be employed the present generation will hardly see the completion of the dome.

THE number of calls for fires, or supposed fires, received during the past year by the Metropolitan Fire Brigade has been 2,630. Of these 337 were false alarms, 149 proved to be only chimney alarms, and 2,144 were calls for fires, of which 184 resulted in serious damage, and 1,960 in slight damage. These figures refer only to the regular calls for fires, or supposed fires, involving the turning out of firemen, fire-engines, fire-escapes, and horses. The fires of 1883, compared with those of 1882, show an increase of 218, and an increase of 446 if compared with the average of the last ten years. The quantity of water used for extinguishing fires in the metropolis during the year has been 28,998,078 gallons, or about 130,000 tons. About 67,000 tons were taken from the river, canals, and docks, and the remainder from the street pipes.

TELEPHONES may be a necessity, but some method should be devised by which it will cease to be indispensable to affix wires to the chimneys of houses and carry lines over streets. The companies have now, however, unlimited power in that way. The Wandsworth Board of Works took an action in order to prohibit the telephone companies from crossing the streets in the district with wires. The case was tried before Mr. JUSTICE STEPHEN, and his Lordship decided that the Board possessed proprietary rights over the streets, and that the word street meant not only the surface of the roadway, but a certain depth below the surface and a certain area of air space above. Although the wires might not be a nuisance, or dangerous to persons crossing the streets, yet collectively they might form an appreciable nuisance. The judgment being in favour of the Board the Company appealed, and have succeeded. According to the Master of the Rolls the Board have no property over the street, but in the street—to the extent that is required by the public, and no more. The effect of the judgment will be that apparently other things besides wires can be put over a street so long as they do not interfere with the area of ordinary user.

THE report of Mr. VULLIAMY to the Metropolitan Board of Works refers to the massive lamp standards and guard-posts which have been erected at the entrance to Northumberland Avenue from Charing Cross. The models were prepared by Messrs. MABEY, the sculptors, from designs made under the architect's superintendence. The standards and posts, which are of Classic design, are of cast iron, and each standard rests upon a solid base of grey granite. The globe lanterns, which are constructed so as to revolve for the convenience of cleaning, are, with the cradles supporting them, of bronze. A pit has been formed in the pavement at each refuge, in which the gas-meter valves and other fittings are placed. The burners are regulated to consume 35 cubic feet of gas per hour, and to give light equal to that of 150 sperm candles, so that the three lamps at each refuge have an illuminating power equal to that of 450 sperm candles. The lamps are by far the best in design in the metropolis, the light is most brilliant, and yet the whole cost has been only 2,500*l.*



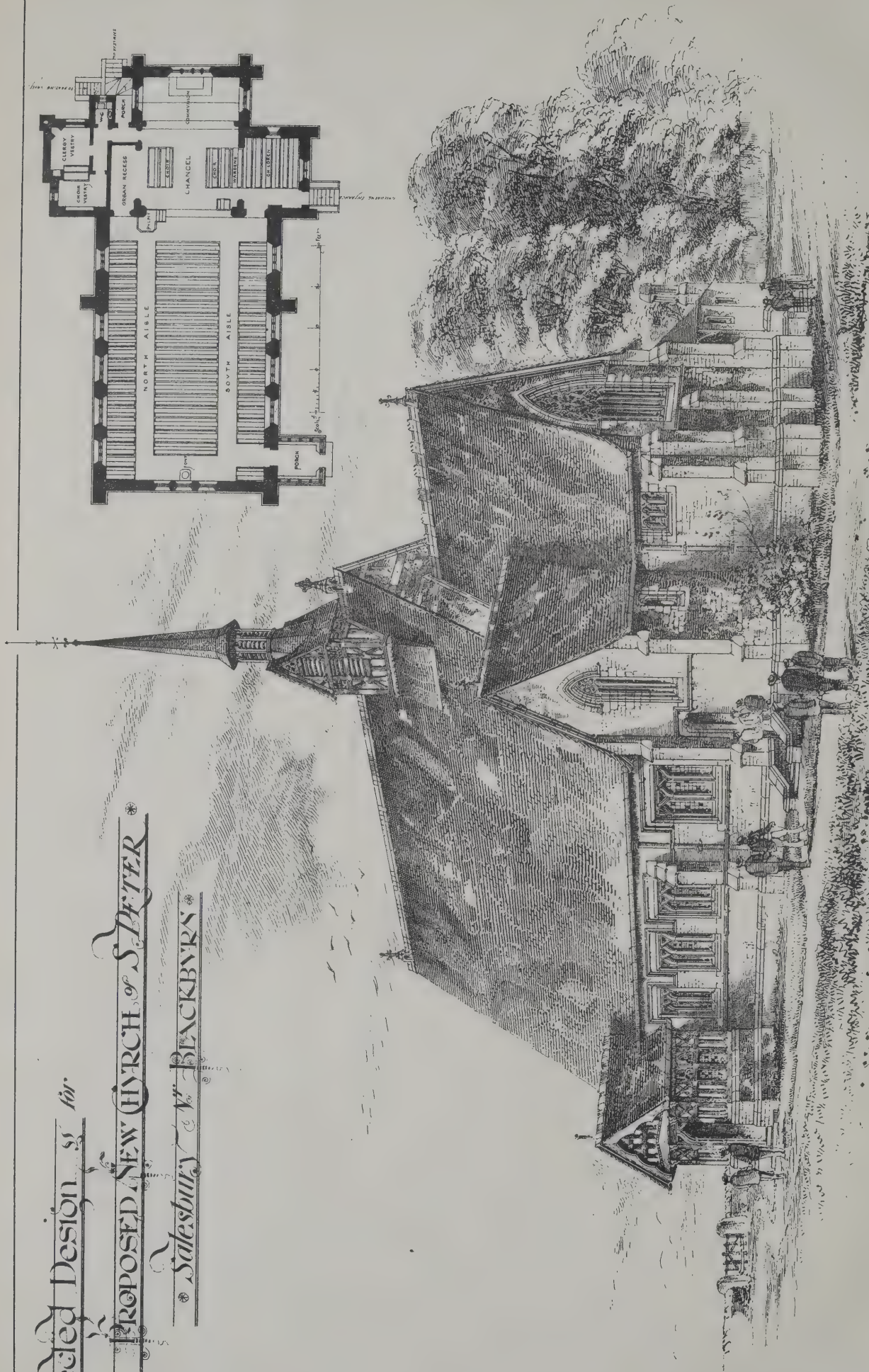
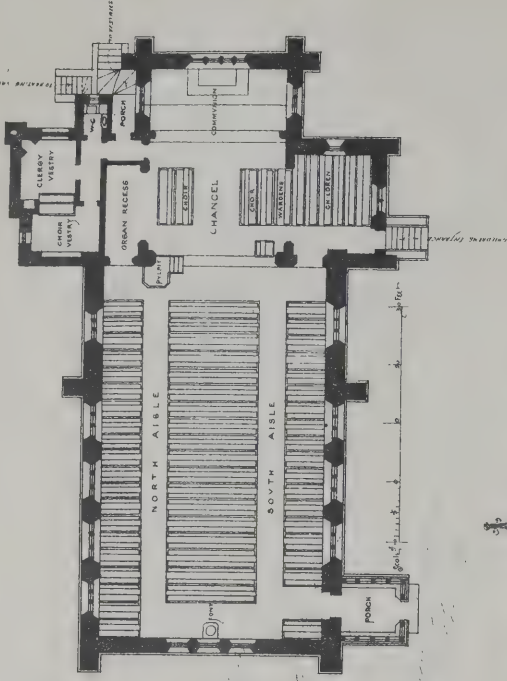




Selected Design for

PROPOSED NEW CHURCH OF ST. PETER

Salesbury & W. BLACKBURN



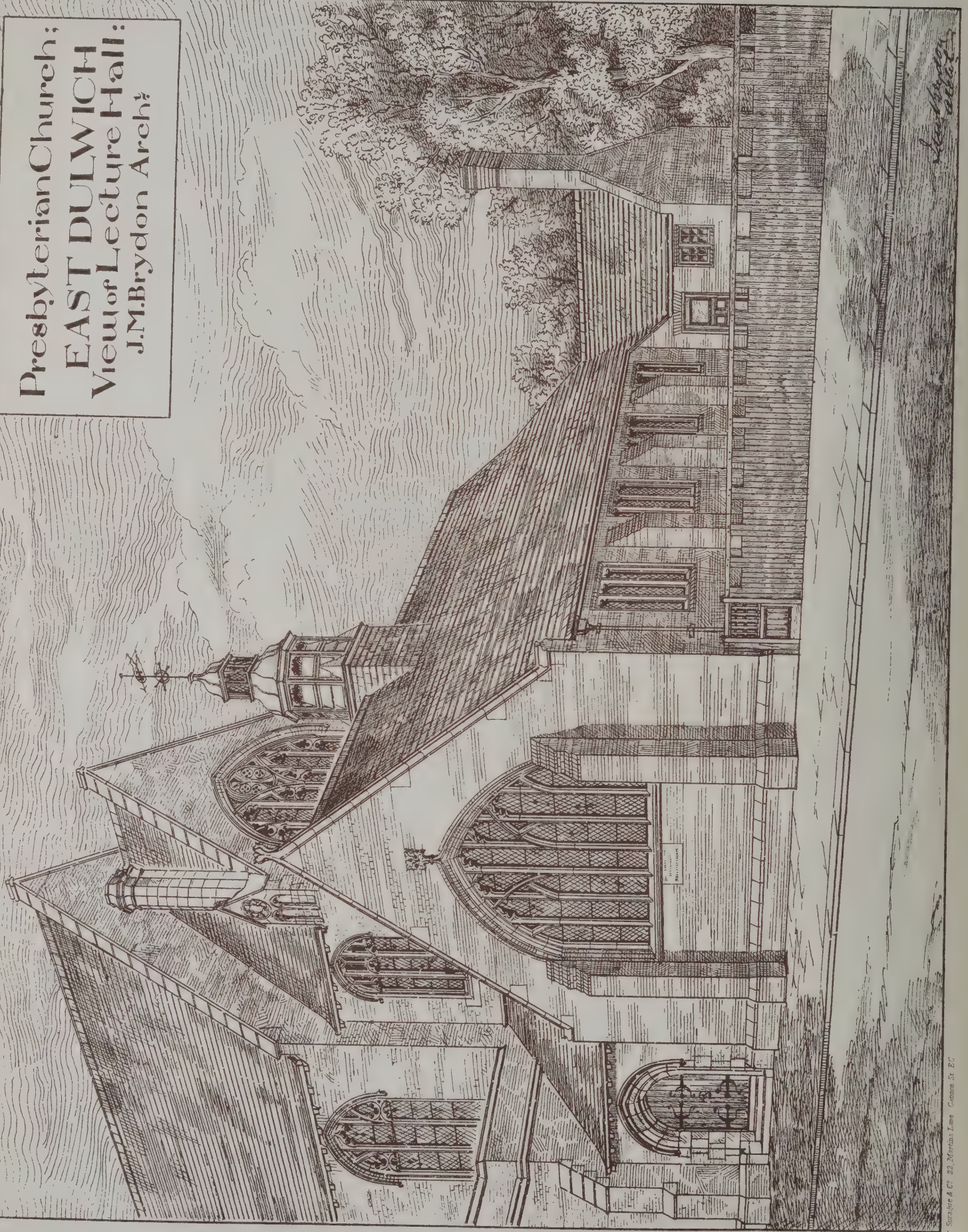
Stones & Grindwell, Architects  
Richmond, Surrey: BLACKBURN & SONS







Presbyterian Church;  
EAST DULWICH  
View of Lecture Hall:  
J.M. Brydon Arch<sup>t</sup>





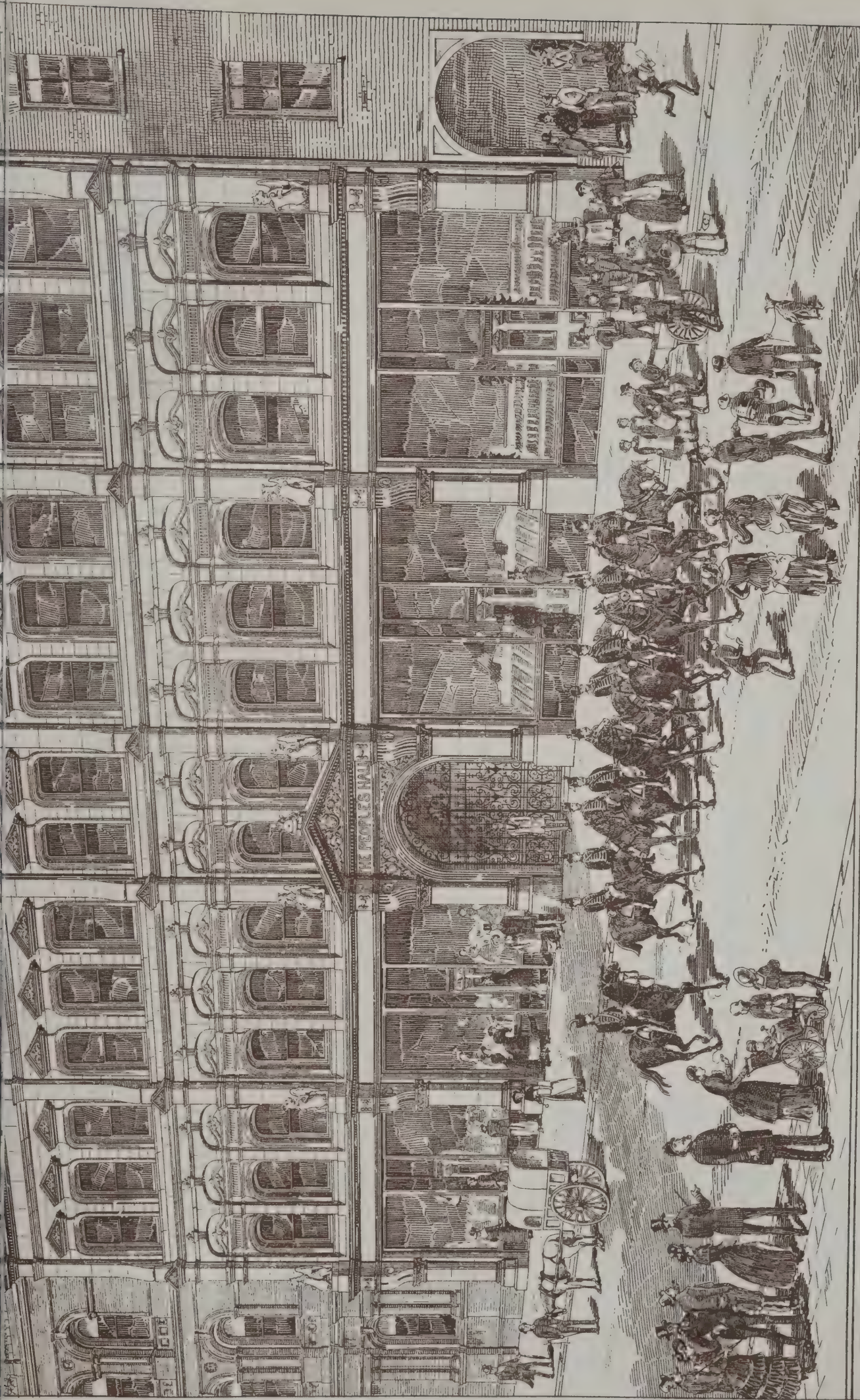




The Architect, June 21<sup>st</sup> 1884.

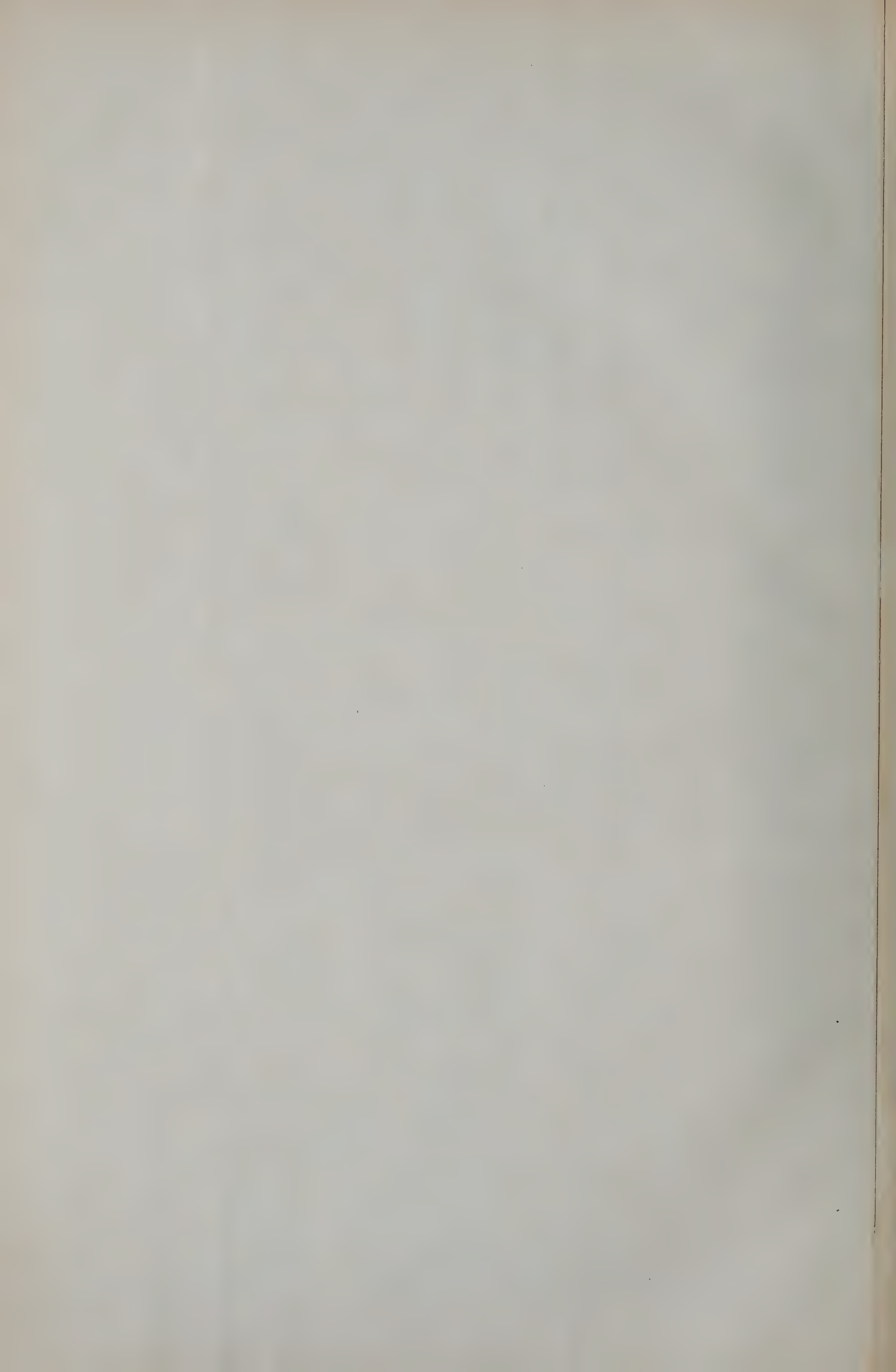






Co-Operative Stores. Albion Street, Leeds. J. Wrechitt Connors, FRIBA.  
 Architect. 33, Park Square, Leeds.







Episcopal School, Fort William.

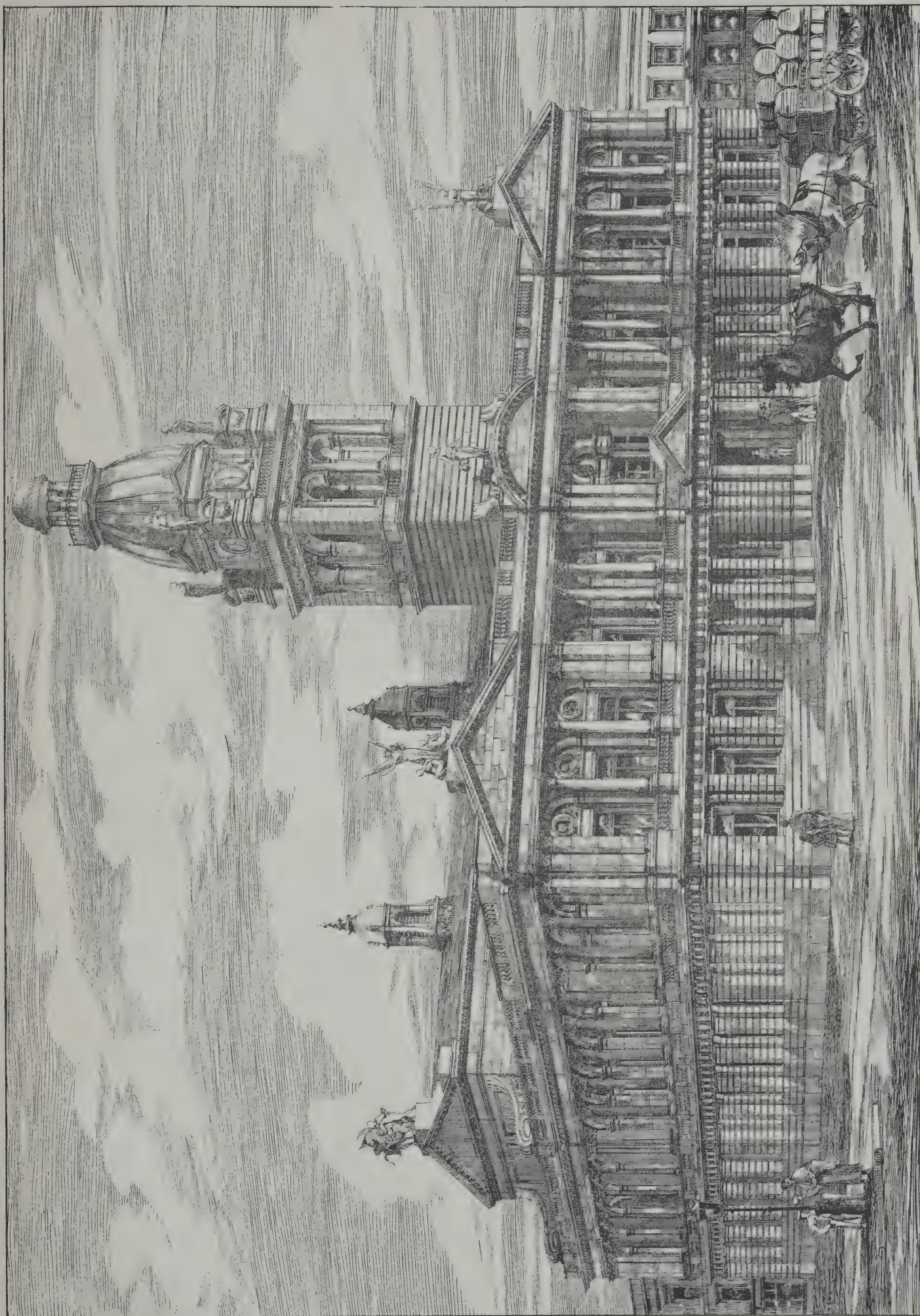
Alexander Ross, Architect, Inverness.











DESIGN FOR TOWN HALL, BRISBANE.

W. L. VERNON, ARCHT.  
A. W. CROSS, ARCHT.  
JOINT ARCHITECTS.







## ILLUSTRATIONS.

THE LEEDS INDUSTRIAL CO-OPERATIVE SOCIETY'S NEW CENTRAL STORES.

**A**MONGST working-class co-operative societies that of Leeds is the largest, numbering 20,000 members, and having an annual turn-over of half a million. The management of so vast a concern—one with over 50 branch stores in addition to the central one—necessarily requires a large staff of clerks, and considerable accommodation for the directors, members, &c. Until the provision of the premises illustrated this week, the various shops, offices, &c., in connection with the head department were scattered in different buildings. To obviate the inconveniences of this, the directors recently purchased the property next to the largest of their central shops, cleared the ground, and erected the buildings shown in our view.

The basement of these buildings is lighted almost entirely by HAYWARD BROS. & ECKSTEIN'S prism lights, which have answered their purpose so well that the cellars are literally the best illuminated part of a building that has not a dark corner in it. As a result, the furnishing, hat and cap, and part of the drapery departments are placed on this floor, the approach being by three spacious staircases. These shops occupy the whole of the front to a depth of about 46 feet, the remainder of the basement being given up to storage, heating arrangements, kitcheners, &c. A large hydraulic hoist delivers goods from the ground level to that of basement, and a miniature tramway conducts to all parts of the floor. The ground-floor provides accommodation for the drapery, grocery, bespoke, ready-made, and boot departments. The centre of this floor is pierced by a wide passage or arcade, which leads to the main staircase at the back. This is of wrought iron, with the treads of HAWKSLEY'S patent. The first floor contains the offices and strong-rooms, board-room and committee-room, and a large reading-room for the use of the members. The second floor is devoted wholly to a large public hall, and to the retiring-rooms, &c., in connection with it. In the roof on a mezzanine floor is accommodation for the caretaker, and for the working tailors, &c. The whole building is well and substantially erected, with sufficient ornament to mark it as one of a quasi-public character, and as one having some special importance as the centre of so large a society.

The architect is Mr. J. WREGHITT CONNOR, F.R.I.B.A., of Leeds. The joiners' work has been done by the Society's own men, under the superintendence of Mr. J. TEARDILL, who has also acted as clerk of works under the architect. Local contractors have carried out the rest of the work with great expedition. The whole building has been completed in nine months.

## LECTURE HALL, EAST DULWICH.

**T**HIS hall was opened about four months ago, and is the first portion of an intended new church in connection with the Church of Scotland in London. It is built of red brick, with stone mullions in the windows and dressings to the doorway. Internally the walls are lined with boarding—stained and varnished—about 5 feet high, and plastered above. The roof is open to the ridge, the principals being painted a dark red colour, with toned white plaster panels between them. In the turret is one of BOYLE'S air-pump ventilators, and the hall is warmed by one of ELSLEY'S ventilating grates. The new church is to be built adjoining the lecture hall, as indicated in the view, an excellent site fronting Goose Green.

The contractor for the works was Mr. WILLIAM SMITH, of Church Street, Camberwell; and the architect, Mr. J. M. BRYDON, 5 Cambridge Place, Regent's Park.

## ST. ANDREW'S SCHOOLS, FORT WILLIAM, N.B.

**T**HESE schools have been erected in connection with the congregation of the Episcopal Church, principally through the liberality of Mr. G. B. DAVY, of Spean Lodge. The walls are entirely of red granite, with freestone dressings. The windows are fitted with stained glass by Messrs. CLAYTON & BELL. The schools are fitted with every appliance for teaching, and are placed in centre of well laid out play-grounds and garden. The cost, including enclosures and railings, was over 5,000*l*.

The architect was Mr. ALEXANDER ROSS, of Inverness, and the contractors, Messrs. McDUGALL & McCOLL, Oban.

## ST. PETER'S CHURCH, SALESBURY, NEAR BLACKBURN.

**T**HE present church at Salesbury having become very dilapidated and almost unfit for use, it has been thought necessary to take steps for the erection of a new church. A committee was recently formed for that purpose, and designs invited for a limited competition. The design selected we illustrate this week. The building will be faced externally with local stone in broken courses hammer-dressed, and will have dressings from the same quarry, the stone from which is of a warm grey colour. Internally the walls will be lined with bricks and plastered, with dressings of boasted stonework. All the exposed woodwork, such as roofs, seats, &c., will be of pitch pine, varnished. The woodwork of porch and belfry will be of oak. The roofs will be covered with green Velineli slates, with brown-red ridging. The church will contain 400 sittings.

The illustration is from a pen-and-ink sketch made by Mr. HERBERT RAILTON, from the design of the architects, Messrs. STONES & GRADWELL, 10 Richmond Terrace, Blackburn.

## BRISBANE TOWN HALL.

**I**N this design official accommodation is provided on the ground-floor for the town-clerk, city engineer, Health Board, inspector, &c. At the extreme end of the building is placed the large hall, measuring (inclusive of the orchestra) 145 feet by 65 feet, in connection with which are suitable cloak and retiring rooms for the public and the performers. The first floor contains the council-chamber, aldermen's rooms, mayor's parlour and reception-rooms, &c., and a large banquetting room, with serving-room attached. The whole of the principal rooms on this floor are so arranged that they can be used *en suite* on the occasion of any great municipal festival. A large kitchen, larders, store-rooms, and caretaker's rooms are provided on the second or attic floor. The fronts are intended to be faced with local freestone, and the estimated cost is about 40,000*l*.

The design is the joint production of Mr. W. L. VERNON, of George Street, Sydney, N.S.W., and Westminster, and Mr. ALFRED W. CROSS, A.R.I.B.A., of Hastings and 56 Chancery Lane, London, W.C.

## OFFICIAL NOTES ON FOREIGN TRADE.

**T**HE import of pig and cast iron into Italy during 1883 has been somewhat in excess of the quantity in 1882, owing partly to the excessively-low freights running throughout the year, and partly to imports made directly from Glasgow for Government account for the use of the arsenals and manufacture of projectiles. The import of bar and angle iron has fallen off considerably, and this is partly due to the import of Westphalian iron *via* St. Gothard. It is a fact that German iron of these qualities is forcing its way into Northern Italy, and that there is a diminished import from England for the towns formerly supplied through Genoa. The German makers are also supplying Northern Italy, as far south as Alexandria, with iron for hoops, wine vats, horse shoes, &c., and also for screws; "blooms" are also coming from Westphalia, and the better qualities of iron from Nassau. The Germans have active agents and travellers, who canvass the country for orders, and not only take the lowest possible terms, but give prices delivered at the railway station, and take the trouble and uncertainty of incidental expenses off their customers' hands; whereas English firms only give prices at the works, and the buyer often finds that the incidental expenses of wharfage, dock dues, agency, &c., run up, more especially on small parcels, to sums quite beyond what he had reckoned on. It deserves to be noted that the Germans are beginning to do a trade in boiler iron, and Frankfort firms are now finding means of placing zinc of German make where formerly nothing was used but the productions of the Belgian Vieille Montague Company. In other metals German houses are successfully competing for custom, some of the late contracts for supply of manufactured copper to the Italian arsenals and workshops having been taken by people who will supply German goods, where formerly they would have dealt with England. An establishment for making white lead at Cogioletto, and one for red lead at Spezzia, have been set up. Both are to work under German patents.

German Portland cement appears to be coming into favour. The Stettin Portland Cement Manufactory has been enabled to increase its production to 32,500 tons, as against 26,500 in 1881. The wages paid amount to 240,000 marks, and in the lime-pits belonging to it 45,000 marks. The bulk of the cement was sold into the interior, and principally used for public works. But



besides this, 13,000 tons of cement were exported in 1882 to Denmark, Sweden, Russia, Austria, and North America from these works. Whilst the export to Russia diminished under the discouraging effects of the high protective tariff, a new region for sales was opened in North America. The Stern Portland Cement Manufactory is the next in importance, having turned out a total of 204,000 barrels. The works employ on the average 600 men. The Pomeranian Portland Cement Company at Quistorp produces about 208,000 barrels a year, and employs between 600 and 700 men.

Early in 1883 it became evident that the prospects entertained at the commencement of the year of advantageous sales of timber in Gothenburg, founded upon the favourable state of the stock in London, were not realised, as offers had to be accepted to begin with at 10s., and later at 15s. to 20s. below the original quotations. This unfavourable turn is believed to have been caused by diminished requirements of the English farmer and the knowledge that the supplies in the north of Sweden, which are said to have been about 50,000 standards, were considerably larger than the preceding year. To the before-mentioned disadvantages, circumstances may also have added want of activity in building in France (Paris) during the year. It is however to be hoped that the prudent arrangement by a number of the leading wood exporters in Norrland to limit their export during 1884 to three-fourths of the shipments in 1883, will improve the prices also. With regard to Gothenburg, the prices during the year may be said to have been 31s. per 240 running feet of deals, and 15s. 6d. for 2½ by 7-inch battens.

The Government offices in Serajevo are to be Renaissance in style, and will contain 200 rooms. The works will take two years to complete, and cost 35,000l. The commerce of Bosnia, however, seems more and more to be slipping out of the hands of the natives. Many merchants who were doing a good business before the Austrian occupation have ceased to trade, and live merely on the rent of their house property. House-rent in Serajevo has become exorbitantly high, and they find a better and surer return for their money in repairing old houses or building new ones, to let to Austrians and other strangers, than in mercantile transactions. This, however, cannot last. When more houses are built, and when the Government buildings in the course of construction are completed, and the numerous houses now taken for Government offices at high rents vacated in consequence, rents must fall, and, as owing to the high price both of labour and of material since the Austrian occupation building has been exceedingly expensive, it is believed that eventually house-owners will receive but little interest on their outlay.

Timber, which is the chief article of import at Lübeck, met with an indifferent sale in 1883, as buildings for industrial purposes were erected to a very small extent, and the number of houses built for private purposes was likewise small, and not sufficient to cause an extensive sale. The tariff of 1882 has been injurious to the timber trade, it is true, but certainly not to such an extent as was apprehended, and the high duty on prepared timber has caused some timber merchants of Lübeck to build saw-mills in order to get their timber prepared here. Besides some smaller mills that are already finished, a very large saw-mill is being built at present, which will be able to furnish a great quantity of prepared timber for the cabinet-maker and for building purposes. Last year the Imperial Government proposed again to raise the duty on timber, but the German Parliament would not agree to this Bill.

The concession for the construction of an aqueduct to convey drinkable water from the mainland to Venice—which was granted on January 25, 1876, to Messrs. Ritterbandt & Dalgairns, representing British capitalists—was subsequently handed over by them to the Compagnie Générale des Eaux, of Paris. The aqueduct which passes under the lagoons, the underground pipes for the distribution of the water, and the two large reservoirs in the town, were completed at the end of last year. The total expenditure incurred by the company amounts to 5,000,000 frs. The municipality is to pay the company, from the first day the waterworks are in regular operation, 100,000 frs. a year for the supply of potable water to the 120 public wells in the town, which are to remain open three hours a day. After sixty years the waterworks are to become the property of the municipality. Private families will be provided with water at the price of 60 cents. per cubic mètre (1,000 litres), and the company will also make special arrangements for the supply of large quantities of water at lower rates. The minimum quantity of water which the company will furnish is 250 litres a day. The water is to be taken from the canal Dei Moranzani.

The excavation of the new docks at La Rochelle will, it is expected, be completed at the end of this year, and the construction of the outer harbour has already made some progress, electric light being used for carrying on the works at night. As many as

1,100 men, chiefly Italians, have been employed. The sum voted by the Government for 1884 was 1,800,000 frs., and it is anticipated that a grant of 1,500,000 frs. will be included in the extraordinary budget for the continuation of the works in 1885; but it has been intimated to the Chamber of Commerce and municipality of La Rochelle that further similar supplies must not be counted on for the purpose of finishing the new harbour within the time originally fixed, namely, 1888. With the object, however, of obviating delay in the opening of the port, the State proposes to give a guarantee of 4 per cent. on a loan redeemable in fifteen years, the town finding the money to complete the works; and it is confidently expected that some such financial combination will be carried out, and the works completed within the time intended. Any suggestion for curtailing the works of the new port, as an alternative to prevent delay, is strongly deprecated, in the belief that, unless the entire plan is adhered to, its beneficial effect on trade would be seriously compromised.

The works on the deep water lateral canal to connect Nantes with St. Nazaire are being pushed forward, and the French Chambers have again voted a considerable sum of money for their prosecution: nevertheless there are still sceptics who maintain that the present generation will not see the completion of the undertaking.

The iron works at Basse Indre, near Nantes, turned out during the past year some 8,500 tons of bar and sheet iron, being a considerable increase on the output of the previous year, and in the main due to the fresh impulse given to shipbuilding in the district. They give employment to 450 hands. There has been a fair increase in the demand for agricultural machinery of local manufacture. The excellence of the workmanship causes them to be much appreciated over a large radius. English competition is, however, a serious difficulty in the way of expansion. Local hardware has been in much request, as well for the French colonies as for the neighbouring districts. There have been, moreover, large Government orders. The Anglo-French Company's lead works at Coueron have produced during last year about 10,000 tons of lead, 1,879 tons of piping, 1,017 tons of sheet-brass, 471 tons of white lead, and 375 tons of zinc.

A large barracks is being built at St. Nazaire for lodging about 450 Custom House officers and their families. The railway around the docks has been delivered over to the Western Company, who are erecting their goods station in close vicinity of the port. A row of large warehouses has been built by the Société de France et l'Algérie. A sum of 60,000 frs. has been voted for the purpose of building a lighthouse on the Charpentier rocks, at the entrance of the river Loire.

## NATIONAL HEALTH AND WORK.

AN address was delivered on Tuesday at the Health Exhibition by Sir James Paget, F.R.S., vice-chairman, at the inauguration of the work of the international juries. The subject selected was the relation between national health and work. Sir James said that the average time of sickness among males during the working years is 1'314 weeks—that is, a small fraction more than nine days each in each year, and that among females it is yet a small fraction more. The result is that among males there is a loss of 9,692,505 weeks' work in every year, and among females a loss of 10,592,761 weeks. Thus we may believe that our whole population between 15 and 65 years old do in each year 20,000,000 weeks' work less than they might do if it were not for sickness. The number is not easily grasped by the mind. It is equal to about one-fortieth part of the work done in each year by the whole population between 15 and 65 years old. Or, try to think of it in money. Rather more than half of it is lost by those whom the Registrar-General names the domestic, the agricultural, and the industrial classes. These are rather more than seven millions and a half in number, and they lose about 11,000,000 of weeks; say, for easy reckoning, at a pound a week; and here is a loss of 11,000,000l. sterling from what should be the annual wealth of the country. For the other classes, who are estimated as losing the other 9,000,000 weeks' work, it would be hard and unfair to make a guess in any known coin; for these include our great merchants, our judges and lawyers and medical men, our statesmen and chief legislators; they include our poets and writers of all kinds, musicians, painters, and philosophers. But there is a brighter side to the picture. In a remarkable paper lately read before the Statistical Society, Dr. Longstaff says:—"One of the most striking facts of the day, from the statistician's point of view, is the remarkably low death-rate that has prevailed in this country during the last eight years." In these years the annual death-rate has been less than in the previous eight years in the proportion of two deaths to every 1,000 persons living. The average number of deaths has been 50,000 less in the past than in the previous eight years. In a paper last year, at the



Statistical Society, Mr. Noel Humphreys showed "that if the English death-rate should continue at the low average of the five years 1876-80, the mean duration of male life in this country would be increased by two years, and that of female life by no less than 3·4 years, as compared with the English life table." And he showed further that "among males 70 per cent. and among females 65 per cent. of the increased life would be lived between the ages of twenty and sixty years, or during the most useful period." I should like to be able to tell the value in working power of such an addition to our lives. It is equal to an addition of more than 4 per cent. to the annual value of all the industry, mental and material, of the country. But some will say, admitting that it is desirable, seeing how keen the struggle for maintenance already is, can more than this be done? And the answer may be and must be, much more. In this, as in every case of the kind, every fruit of knowledge brings us within reach of something better. While men are exercising the knowledge they possess they may be always gaining more. This exhibition has scores of things which are better helps to rational health than those of the same kind which we had twenty years ago, and with which the gains already made were won. If I were not in near official relation with the jurors I would name some of them; there are truly splendid works among them. But do not let me seem to disparage the past in praising the present. It is difficult to speak with gratitude enough of what has been done, even though we may see now ways to the yet better. Anyone who has studied the sources of disease during the last thirty years can tell how and where it has been diminished. There is less from intemperance; less from immorality; we have better, cheaper, and more various food; far more and cheaper clothing; far more and healthier recreations. We have on the whole better houses and better drains; better water and air; and better ways of using them. The care and skill with which the sick are treated in hospitals, infirmaries, and even in private houses, are far greater than they were; the improvement and extension of nursing are more than can be described; the care which the rich bestow on the poor, whom they visit in their own homes, is every day saving health and life; and even more effectual than any of these is the work done by the medical officers of health and all the sanitary authorities now active and influential in every part of the kingdom. Good as all this work has been, we may be sure it may become better. The forces which have impelled it may still be relied on. We need not fear that charity will become cool, or philanthropy inactive, or that the hatred of evil will become indifference. Science will not cease to search for knowledge, or to make it useful when she can; we shall not see less than we do now, and here, of the good results of enterprise and rivalry, and of the sense of duty and the sorrow of shame that there should be evil in the land. What more then, it may be asked, is wanted? I answer, that which I have tried to stir—a larger and more practical recognition of the value and happiness of good national health, a wider study and practice of all the methods of promoting it, or, at least, a more ready and liberal help to those who are striving to promote it. In one sentence, we want the complete fulfilment of the design of this exhibition, with all the means towards health and knowledge that are shown in it, and with its handbooks, lectures, conferences, and the verdicts of its juries. We want more ambition to health. I should like to see a personal ambition for renown in health as keen as is that for bravery or beauty, or for success in our athletic games and field sports. I wish there were such an ambition for the most perfect national health as there is for national renown in war, or in art or commerce. And let me end soon by briefly saying what I think such health should be. I spoke of the pattern healthy man as one who can do his work vigorously wherever and whatever it may be. It is this union of strength with a comparative indifference to the external conditions of life, and a ready self-adjustment to their changes, which is a distinctive characteristic of the best health. He should not be deemed thoroughly healthy who is made better or worse, more or less fit for work, by every change of weather or of food; nor he who, in order that he may do his work is bound to exact rules of living. It is good to observe rules, and to some they are absolutely necessary, but it is better to need none but those of moderation, and, observing these, to be able and willing to live and work hard in the widest variations of food, air, clothing, and all the other sustentances of life. And this, which is a sign of the best personal health, is essential to the best national health. For in a great nation, distributed among its people there should be powers suited to the greatest possible variety of work. No form or depth of knowledge should be beyond the attainment of some among them; no art should be beyond its reach; it should be excellent in every form of work. And that its various powers may have free exercise and influence in the world it must have, besides, distributed amongst its people, abilities to live healthily wherever work must be or can be done. Herein is the essential bond between health and education; herein is one of the motives for the combination of the two, within the purpose of this one exhibition. I do not know whether health or knowledge contributes most to the prosperity of a nation; but no nation can prosper which does not equally promote both. They should be deemed twin forces, for either of them without the other has only

half the power for good that it should have. It is said, whether as fact or fable, that the pursuit of science and of all the higher learning followed on the first exercise of the humanity which spared the lives of sick and weakly children, for that these children being allowed to live, though unfit for war or self-maintenance, became thinkers and inventors. But learning is not now dependent upon invalids; minds are not the better now for having to work in feeble bodies; each nation needs for its full international influence both health and knowledge, and such various and variable health that there should be few places on earth or water in which some of its people cannot live and multiply and be prosperous. If, therefore, we or any other people are to continue ambitious for the extension of that higher mental power of which we boast, or for the success of the bold spirit of enterprise with which we seek to replenish the earth and subdue it; if we desire that the lessons of Christianity and of true civilisation should be spread over the world, we must strive for an abundance of this national health, tough, pliant, and elastic, ready and fit for any good work anywhere.

#### SOCIAL SCIENCE ASSOCIATION.

THE presidency of the Association for the ensuing year, 1884-5, has been accepted by Mr. Shaw-Lefevre. The presidents of departments have also been appointed, the following being the complete list:—International and Municipal Law, Mr. John Westlake, Q.C., LL.D.; Repression of Crime, Mr. J. S. Dugdale, Q.C., Recorder of Birmingham; Education, Mr. Oscar Browning; Health, Dr. Norman Chevers, C.I.E., F.R.C.S., Eng.; Economy and Trade, Mr. H. H. Fowler, M.P.; Art, Mr. Beresford-Hope, M.P. The preparations for the annual congress, which is to take place at Birmingham, from September 17 to 24, are being vigorously pushed forward by the different local committees, and a largely-attended and successful meeting is anticipated. It is sixteen years since the Association met, for the second time, in Birmingham, and twenty-seven years since it held, in 1857, its first meeting, which also took place in that town.

#### ARCHÆOLOGICAL DISCOVERIES IN ARABIA.

IN the month of January last Mr. Charles Doughty, an English traveller well known for his explorations in the north of Arabia in 1876 and 1877, proposed to make a present to the Department of Inscriptions and Belles-Lettres of the French Academy of his notes and impressions of inscriptions found in those regions, on condition that the Academy would undertake the prompt publication of these documents. Although similar researches were known to be in progress by a member of the Société de Géographie, M. Huber, and an eminent epigraphist, M. Euting, the Academy did not hesitate to accept the offer. "It is one of the fundamental rules of students of epigraphy not to allow any information to escape them," says M. Renan, in some interesting notes on the subject in the *Journal des Débats*. Moreover, many of the texts copied by Mr. Doughty might have been omitted by MM. Huber and Euting. The documents in question consist of—

- 1st. Two note-books, forming a total of fifty-six sheets, covered with copies of Himyarite, Saffaitic, Aramean, and Greek texts.
- 2nd. A series of twenty-five impressions of the great Nabatean inscriptions of Medain Salih (El-Hidjr, of the Coran).
- 3rd. A map and a series of drawings, rapidly but very exactly executed, of certain views in particular of the monuments of Medain Salih.

The following is M. Renan's account of the new light which Mr. Doughty's discoveries throw on Arabian history, dating from the reign of Augustus:—

Two influences exercised their sway over the north of Arabia at the commencement of the Christian era—the Yemenite influence, coming from the south, and the Nabatean kingdom, coming from Petra and Bosra. . . . It is probable that the rich populations who constructed these handsome mausoleums lived principally in tents. The resemblance of the mausoleums drawn by Mr. Doughty with the tombs of the Valley of Kedron, and other funeral monuments hewn in the rock in the neighbourhood of Jerusalem, is remarkable. We may assert that if the age of these latter monuments was still doubtful, it is so no longer. Here we have, in effect, monuments which are evidently their contemporaries, and which bear inscriptions ranging them with certitude from the time of Augustus to that of Titus. Several of the monuments of Medain Salih even bear the names of the sculptors who carved them. A curious thing about these inscriptions is that Mahomet certainly saw them, only in his time they could no longer be read. The most superficial acquaintance with their contents would have convinced him that the great caves where the inscriptions were found were funeral monuments. Now, in five or six passages in the Coran these caves are spoken of as the houses of giants, refugees of the antique race of Thamoud, who were punished by God for their crimes. Already sundry objections had been made against this view of the monuments, by Arabian writers, from the



very natural consideration that these low caves constituted unlikely abodes for a race of giants. When reading to Mr. Doughty the essentially funereal character of these texts, he could not refrain from the reflection that their interpretation would be a serious discomfiture for the Moslems. While engaged in taking stamped impressions of these texts, placed at great height about the door of the vaults, the natives inquired of the explorer, not without anxiety, "Are there people in your country capable of reading this writing?" Mr. Doughty told me that the idea of tombs, which would convict the Coran of an archæological error of the clearest kind, greatly disturbed the minds of the Arabs. He feared lest these inscriptions might be made to suffer some day for the refutation they give to a revealed book. I do not think so; apology *à outrance* of sacred texts never remains without reply. A reflection, at any rate, that suggests itself is the slight antiquity of prehistoric Arabia. The stories relating to the impregnable abodes of the Thamoudites were relegated, in the time of Mahomet, to a fabulous antiquity. Now when Mahomet lived these pretended cave-dwellings had scarcely more than five hundred years' existence; and, if his contemporaries had possessed merely an inkling of palæography, they might have divined their sense.

Mr. Doughty is about to publish a narrative of his journey.

## CONTINENTAL BUILDING TRADE SCHOOLS.

THE Royal Commission on Technical Education gave attention to the intermediate technical schools which are found in some towns abroad, and which afford a specialised instruction suitable for builders, for engineers, and for miners. Building schools are found principally in Germany and Austria, and do not exist as independent schools in either France, Belgium, or Italy. They resemble one another very closely in character and afford little actual trade teaching. Their chief object is to impart theoretical instruction adapted to the wants and requirements of superior workmen and foremen engaged in the building trades. Incidentally they serve for the education of draughtsmen, surveyors, inspectors of works, and occasionally of a lower grade of architects.

The *Building Trade School at Stuttgart* is one of the most important schools of this kind in Germany. The building is a magnificent modern structure, designed by Professor Egle, who is also president of the school. The cost of the building was above 50,000*l.*, and the annual budget for 1880-81 amounted to 7,378*l.*, of which 973*l.* was contributed by the payments of the pupils, the remaining sum of 6,405*l.* being paid by the State. The school is divided into two mathematical preparatory courses, and three special science divisions:—(1) for those engaged in the building trade; (2) for land surveyors and land agents; and (3) for mechanical engineering. There are twenty-eight masters of departments and thirteen assistants. It is important to notice that, unlike the French, Swiss, and other schools of the same kind, the higher technical education of Germany is not gratuitous. The pupils pay 36*s.* per half-year; no one is admitted under fourteen years of age, and many, having been engaged in practical work, are of mature age. The number of scholars in the winter course was 448; more than half of these belonging to the building trade; the average age being twenty-one years. The summer course was attended by 133 pupils. The course in each half year is the same. There are six courses of half a year each, and a considerable proportion of the students remain for this length of time. As many of those attending the classes are almost illiterate, preparatory courses of ordinary study are carried on together with the technical work.

The subjects taught are—mathematics, physics, general geometry and statics, freehand and ornamental drawing, geometrical drawing; building construction, consisting of lectures, drawing, and designing; surveying and mensuration, including lectures and practical field work; machine construction, including lectures, drawing, and designing; special drawing for joiners; gymnastics.

The drawing is taught as follows:—The student begins with plane geometrical drawing, and passes on through a series of graduated examples until he finally makes complete designs for public buildings, with the plans, sections, elevations, and perspective drawings. Professor Egle has a special method of teaching the projection of shadows, by means of parallel planes arranged to follow in contours of equal illumination.

The arrangement of the building is very commodious, and much care and thought have been bestowed on the questions of lighting and heating, as also on the general fittings of the school. This institution appeared in every way thoroughly adapted to workmen, and seemed a typical school for artisans. Drawing in all its applications to industry was most carefully taught, and the studies of the pupils evinced a thorough acquaintance with the subject.

This is in no sense an apprenticeship school, as no practical work of any kind is attempted. The object of the school is to supplement the instruction of those practically engaged in the various branches of the building trade. With the exception of modelling from plaster casts, the whole of the teaching is purely theoretical. Here, again, we see the importance of the principle

insisted upon in Germany of the continuation in the Fortbildungsschule of the education begun in the primary school. Only a few of the best of the pupils in these schools come to them from the Real Schulen.

The *Building Trade School at Dresden* is very similar to the above. The course consists of four consecutive winter sessions; it being understood that the pupils are occupied in their various trades during the intervening summers. On entry the pupil must be sixteen years of age, and must have passed through the elementary school. The pupils pay 30*s.* for each course. Like the other schools of its class, this is entirely a day school.

The first course consists of the general principles of architecture, architectural drawing, freehand drawing, arithmetic, geometry, projection, and German. The second course consists of the general principles of architecture, building construction in stone and wood, the laws relating to building, the elements of architectural drawing, designing, freehand drawing, mathematics, physics, perspective, and German. The third course comprises building construction, structures in stone and wood, plans of buildings, history of architecture, designing, freehand drawing, mathematics, physics, mechanics, and German. The fourth course consists of building construction, including construction in iron and other metals, modes of warming, heating, and ventilating buildings, designing, freehand drawing, mechanics, perspective, surveying, levelling and plotting, and bookkeeping.

This school may serve as a type of the Saxon building schools, of which there are four principal ones. All of these schools, being under the Minister of the Interior, have an identical organisation.

The *Building Trade School of Chemnitz* forms part of the Higher Trade School which we have elsewhere described. A school of a similar character is attached to the Munich Industriell-Schule, and there is also a building trades school in connection with the Berlin Handwerker Verein.

There are two types of building trade schools in Austria, the one being called the State Trades Schools (Staatsgewerbe Schulen) and the other the Foremen's Schools (Werkmeister Schulen). The more important of the former class are those of Reichenberg, Brünn, Graz, Salzburg, Bielitz, Pilzen, Czernowitz, &c. Many of these are only winter schools, because the workmen are employed in their ordinary vocations during the summer months, but during the hard Continental winters they are unable to carry them on. Some of these are only winter building schools, whilst others embrace a wider range of instruction, and more nearly correspond with the Industrie Schulen of Bavaria, serving the purpose of training men generally for intermediate posts in industrial works.

Schools of this kind vary considerably according to the requirements of the district in which they are situated. Thus, for example, the school at Graz contains two divisions, one for those in training for, or already engaged in, any one of the different branches of the building trade; and the other an applied art division for the various trades in which art knowledge is necessary.

To this school is also attached a continuation school (Fortbildungsschule), and an evening and Sunday school for journeymen and apprentices. These evening schools continue the instruction of the primary school, with, in addition, suitable lessons in drawing adapted to the various industries, together with modelling, wood carving, &c.

All these schools have for their object either to give a special preliminary training to workmen who are about to enter various industries, or by means of winter, evening, or Sunday instruction, to supplement, by theoretical teaching, the education of those who are already engaged in trade or business as workmen or foremen.

*Building Trade Schools, Vienna.*—There are two schools of this kind in Vienna, the aim of them being to give to apprentices and young men engaged in the building trades a theoretical knowledge of all the details of their industry. These schools are open all the year round, but the summer courses are thinly attended, because the great majority of students are employed at their work during the summer, and are saving money to enable them to attend the schools when building operations are suspended in the winter. In the one of these we visited there are 150 pupils in winter and 50 in the summer. The fees amount to from 1*l.* 13*s.* 4*d.* to 2*l.* 18*s.* 4*d.* for the half year. Boys come to the school at fifteen, and usually go through a two years' course, with half a year for preparation if not sufficiently advanced.

The instruction is almost entirely theoretical, but in certain difficult operations experimental work is done by the classes. The pupils are mostly sons of builders, contractors, and small employers. The school has existed since 1868. It is situated in rather a thickly populated portion of the city, in order to be near the homes of the students. The hours are from eight to twelve in the morning, and from two to six in the afternoon. The school receives 917*l.* from Government and 83*l.* from the town.

In addition to day-school work, the rooms are used for evening and Sunday schools, and attended by from 150 to 200 pupils, who are required under their conditions of apprenticeship to come for two nights a week and on Sundays. This department of the school is largely supported by the Masters' Association.

The preparatory class contained seven boys, 14 to 15 years old,



who were studying geometry. The papers in geometry and in perspective were neatly executed. Some of the drawings in books, copied from blackboard drawings, were found to be creditably done. The freehand, outline drawings, and coloured designs of ornament were very good. In the first course were six boys, 15 to 17 years old, who spend most of their time in drawing and in studying the sciences bearing on construction. They devote twelve hours a week to perspective, geometry, and lectures, and make detail drawings of wood joints, scarfed tie beams, &c. The second course included 15 students, 17 or 18 to 25 years of age. There were some clever drawings of details of architecture and construction, but the freehand and shading was not good. The third course comprised 10 students, who were drawing from casts and making original designs, plans of buildings, finished drawings, &c., with elevations and sections. In the fourth course were two students. It must be seen that these small classes indicate a great waste of teaching power; but the visitors were informed that everything is as different as possible in the winter. Most of the students have had more or less of workshop experience before they come.

Two free studentships are offered by the Gewerbeverein.

The most advanced students make complete architectural drawings, in addition to which they calculate all the quantities of material required, prepare specifications, and work out estimates in detail, and show, as a contractor would have to do, the cost at which a building can be erected. They hand in *pro forma* "tenders," which are examined by the teacher, and the first place is given to the student who is most correct in his calculations, "planning," and "setting out," and who shows correct judgment of the price of the work to be done. Most of the students become draughtsmen, builders' foremen, clerks of works, and some become architects. There is an annual exhibition of drawings and designs, and friends are invited to see them.

A large room is filled with cabinets of building materials and models of all kinds, chiefly examples of building construction. There are roofs, arches, suspension bridges; in fact, it may be said that there is not a building difficulty which is not represented by some model, showing how it may be dealt with. There are also books of drawings, photographs, and descriptions of buildings, and information relating to architecture generally. The aim of the Vienna school is to give intelligence to builders, and this is the first and safest step towards the construction of good buildings. The professors spoke with confidence and enthusiasm of the results of the school. In considering these schools, among the points to be noted are, first, that the pupils are required to have had a fair preliminary education before entering them, or to supplement it in the school itself. Second, the instruction is mainly, if not exclusively, theoretical. Third, that throughout the entire course of instruction great attention is paid to freehand and geometrical drawing; and fourth, nearly all the students are or have been practically engaged outside the school in the work of their trade. It seems necessary that special attention should be drawn to the fact that parents not only make great sacrifices for the education of their children, but that the young men themselves work hard during the summer months to save sufficient money to pay their school fees, and to support themselves during the winter when work is slack.

### PULLMAN CITY.

THE report of Mr. Mather on technical education shows how much has been done in America in founding colleges and schools, but other institutions for the advancement of the work-people are not numerous. As at least sixty hours a week have to be devoted to labour, there is little leisure for study or recreation. There is no half-holiday on Saturdays, and during the year there are very few holidays. Libraries and reading-rooms are less available for the working classes than in England. Clubs and recreative institutions, promoted by the employers for the employed, are not prevalent. There is not much interest manifested by employers generally in the social condition of the people. This may be accounted for by the number of joint-stock companies.

The important experiment made by Mr. Pullman, the famous railway-car builder, is therefore considered to be worthy of special mention by Mr. Mather. Pullman City is situated about nine miles from Chicago. Its population consists of the men and their families employed in the extensive works recently built by the Pullman Company. There are at present about 3,000 inhabitants, but other works are in course of erection, and the population is increasing. The town is the creation of the company, and is designed by one architect. The whole scheme has been to surround the working-classes with simple forms of beauty, cleanliness, and order, and with the influences that refine and elevate the mind and character. No spirituous liquors are sold within the town. This did not prevent some drinking in the outlying districts when the people first came to take up their abode; but a marked change has taken place under the influence of other attractions within the town. There is a theatre where amateur performances are given by the people, as well as by professional players. The quality of the plays is under control of the authorities. In itself the

theatre is a beautiful specimen of decorative art, and is replete with every convenience. A handsome and well-stocked library and reading-room is open at all hours. A market-hall affords an ample supply of provisions of excellent quality, besides which there are shops for wearing apparel, &c. A beautiful church offers opportunity for every denomination to carry on public worship at various times. The houses are well built, elegant and comfortable, but the rents are very high, varying from 8s. to 40s. per week. The provision for open air games is excellent, with extensive cricket, base-ball, and football grounds, skittle alleys, &c. Boating on the small lake is well provided for. A splendid school building for the accommodation of five hundred children in the several grades is specially worthy of notice. The education is free, but provided for from the general taxation, which is included in the rents. Gas and water are supplied to every household. Large livery stables and storehouses afford their respective accommodation. The streets are laid in hard gravel and lined with shade trees. Squares and corners are occupied with flowers and shrubs. There is no provision yet for a night-school or for science teaching or drawing, but these facilities are to be supplied. The works are replete with every convenience as respects sanitary arrangements and washing-rooms for the men. The working man's life under all these conditions is approaching the ideal. With continuous employment secured, and wages maintained, there can be no doubt that this noble effort to elevate the labouring classes will be a permanent benefit. It is at present self-supporting, and the company receive in all about six per cent. for their total outlay on the town.

### AMERICAN FIRE EXTINGUISHERS.

THE report of Mr. Mather refers to an apparatus for fire extinguishing which has been adopted in America and Canada. Wrought-iron tubes, in parallel lines 10 feet apart, are fixed under the ceiling of a room in a mill, for instance. At 12 feet distances along the tubes small valves are placed, hanging downwards. The pressure of water in the pipes keeps the valve perfectly tight, so that no drops can escape, and the excellent workmanship in the joints of the piping (which is only one inch in diameter) also prevents any dropping of water. The small valve is ingeniously constructed, so that a relatively low temperature, say 130° Fahrenheit, melts a fusible metal ring placed on an exposed part of the valve. The softening of this metal by the heat of the fire causes the pressure of the water to overcome the resistance in the valve, and an aperture of one-half an inch bore is opened up by automatic action. The water is broken up by a spray-distributor which it strikes, and a copious shower of rain falls on to the floor after first striking the ceiling. Thus any fire occurring in a building causes one or other of these extinguishers to operate in a minute after it commences, and is immediately extinguished without much damage being done by water. An electric bell is also sounded when the extinguisher acts, to call attention. The insurance companies in Boston have recognised this system as so effective that they insure mills at a lower rate when furnished with such appliances (although the mill be not fireproof) than fireproof mills without these extinguishers. The Boston Manufacturers' Mutual Fire Insurance Company have issued specifications for mill-buildings, which they recommend above all other construction, showing wooden beams and floors throughout, in preference to the expensive fireproofing now so general in English mills and manufactories. This system of extinguishing is adopted in about 500 buildings, and is being rapidly extended. No new mills are built fireproof. The economy in outlay of capital is of great importance.



### Board School Competition at Darlington.

SIR,—Your paragraph in the issue of the 7th *re* this competition was short and simple. It contained four clear statements—viz., the date of the Board's meeting, the fact that the general committee's report was not adopted, that the Board selected a plan by Mr. F. Brooks, and that this gentleman's father, a member of the Board, took part in the decision.

Mr. F. Brooks, the successful competitor, writing in your last week's issue, says your paragraph is an *ex parte* statement. From cuttings sent you, you would see that your paragraph coincides in every particular with local newspaper reports—perhaps only lacking your emphasis. You will notice, moreover, that Mr. Brooks, in his lengthy remarks and heartfelt thanks for the great honour done him, carefully abstains from dealing at close quarters with the above-mentioned statements, which he is pleased to term "imperfect, and consequently misleading." Your statements must, therefore, be accepted as correct.

Exercising much generosity, he leaves the "false and base



insinuation respecting his father, and inferentially the censure upon the action of the School Board," to be dealt with as they think necessary. Your paragraph made no insinuation, base or otherwise, against his father; it mentioned a simple fact which no skilful shuffling of words can glaze over. Your paragraph did not say that Mr. Brooks, senior, was aware that it was his son's design he was voting for and supporting by speeches at general and committee meetings, for of course the designs were under motto.

The members of the Board doubtless will be duly thankful to Mr. Brooks for his Quixotic and chivalrous defence of their reputation, impugned only in his own imagination. The members of the Board are above any suspicion of Mr. Brooks's. Very artificial inferences, therefore, must only be regarded as a red herring drawn across the scent.

I am, &c.,  
SANCHO P.

#### Difficulties of Architectural Criticism.

SIR,—My attention has been called by my partner, Mr. Keates, to your notice of May 10, referring to our drawing of "Collyers, near Petersfield" (No. 1,280), in the exhibition of the Royal Academy of this year. I cannot help writing to tell you on our joint behalf that such a notice was a great surprise (and disappointment) to us from you.

To be asked by a journal of established fame to allow the drawing of one side of a house to be reproduced (1883) presumably because some merit was seen in it, and to have another side of same house flippantly called "a wild vagary," unworthy of being hung, &c., would seem somewhat inconsistent. Anyhow, if such a journal as yours treats what is allowed, we believe, by all to be at least original, in an age when dull adaptation of dead stuff seems the highest flight ever taken by architects, one cannot expect very much encouragement from the rest of the world.

Yours truly  
(for Bateman & Keates),  
ROBERT BATEMAN.

Poste Restante, Como: June 14, 1884.

P.S.—I cannot help calling your attention to your notice (immediately preceding and contrasted with that of ours) of "Two Houses at Hampstead," where your critic finds in the fact that "the house belongs to a type that is often built" a valid reason for giving it prominence!

#### Bispham Church.

SIR,—The views and notice you publish invite criticism and remark. I was familiar with the old church of All Hallows, Bispham—an ancient parish—and have often, as I passed through it, admired the fine, well-preserved Norman door. The arch of two orders is richly carved with characteristic Norman ornament, and has shafts and capitals in each door jamb.

I notice, with surprise, that in the letterpress account of this church, in your issue of Saturday last, no mention is made of this fine and interesting door—the more interesting because so very few examples of such work remain with us, and in this county of Lancaster there are hardly any.

I see with satisfaction that this ancient Norman door is rebuilt in or near its old place in the south wall of the nave; but this satisfaction is tempered and toned down by having to look at the ancient door through a tall "leggy" pointed outer arch to the porch, which in shape and feeling has nothing in common with the lovely doorway—nothing!

Indeed, before the church was pulled down, one would have thought that this gem of a doorway would have given the key to the design for the new church. I am inexpressibly grieved to see that it has, apparently, not been allowed to give the architect so much as a hint. There is not a trace of the *feeling* of any ancient architect about the new church. No "Norman," no "Transitional," no "Early English," no other ancient style. One feels that this beautiful door is surrounded by the incongruous.

The junction of the lower with the west end of nave was in the old church quaint—in the new one it is merely awkward.

I confess I feel indignant with the poor "modern" quasi-Gothic "neat" edifice which has sprung up at Bispham. Even the stone walling has had a sort of meretricious roughness imparted to it. The general effect of the church would have been far less offensive had the stone been built in the walls, exposing its natural face as it came from the quarry.

In these days of general architectural education there is no excuse for such disregard of what is due alike to architecture and the public.

I am, Sir, your obedient servant,  
A LOVER OF ANCIENT ARCHITECTURE.  
June 16, 1884.

#### Arsenical Pigments in Mural Decoration.

SIR,—In your report of a lecture on the above subject delivered by Mr. Chas. J. Wright, M.R.C.S. Eng., to the Leeds Architectural Association, the statement occurs that "the size with which the colours are mixed before printing used to be impregnated with arsenic, which was added on account of its antiseptic properties,"

and "the paste . . . may have contained arsenic (as a preservative)." The statement as to the size and the supposition as to the paste may both be correct; but we wish to draw particular attention to the fact that, in the course of a very long experience in the use of both materials, we have never known of a case in which arsenic has been mixed with either as an antiseptic or for any purpose whatever. We have met with similar assertions before, but we have invariably failed to trace them to an authentic source when we have endeavoured to obtain information as to their origin, and we shall take it as a favour if you will permit us to ask Mr. Wright to make known his authority through the medium of your valuable journal. There is another point in his lecture to which we should like to refer—namely, the passage in which it is stated, in reference to the death of a man through a green distemper wash, that "distinct traces of arsenic were found in the excretions by Professor Thorpe, F.R.S." We have followed with very close attention during the last quarter of a century the agitation against the use of arsenical colours and dyes, and it has never yet on any previous occasion received such powerful support as is afforded to it by that statement, if it can be accepted as accurate beyond the possibility of doubt. But the extreme difficulty of finding reagents for use in testing for arsenic, so pure in themselves as not to contain any trace of the poison, suggests to any one acquainted with the subject a doubt as to the origin of "traces" only; and, as a substantial corroboration of our own experience in this respect, we would invite the especial attention of any one interested in the matter to the valuable collection of results of testing copper and other materials sold as pure exhibited by our friend the Mr. Henry Carr referred to in the lecture, at his stand in the International Health Exhibition (east gallery), where arsenical and non-arsenical papers are contrasted and compared.

We are, Sir, yours faithfully,  
WM. WOOLLAMS & Co.

June 18, 1884.

#### Design for a Reredos.

SIR,—I collect published views and bind them the size of a double-page illustration, sticking side by side such views as are vertical or horizontal, as the case may be, so that two vertical views may be side by side, and two of the horizontal sort may be one above the other. Then there is a sorting process in piles of portfolios, some containing more interesting kinds of prints than others, and more worthy of a binding, but as they get put aside before there is any large accumulation, the system involves very little trouble. A little starch paste will last for weeks in a covered bottle—I might say months. Gum is not good for some of the soft kinds of paper used to print plates on.

Being an experienced paper-hanger, after the amount of joining I have practised for years, I consider I have made a very tolerable-looking reredos out of the view you have published with no letter press attached. I have cut it into three, and raised the floor of the central part 3 or 4 feet, introducing an altar cloth cut from the catalogue of an enterprising church furnisher. Above an altar there should be a space for alms dish or supposititious decoration between the mensa and any subject treatment.

The Last Supper, of all subjects, needs keeping up above valleys and lakes, or the idea of an upper chamber is distorted. It has slipped down or the surroundings have jumped up—just two to one on depressing the centre—a thing to deplore. I shall not remark on the details.

Yours,  
H. E.

#### LEGAL.

##### Ipswich County Court.—June 12.

(Before Sir F. ROXBURGH, Q.C., Judge.)

ORR V. SOUTHGATE.

ARCHITECT'S FEES.

This was an action brought by Mr. R. T. Orr, architect, Ipswich, to recover 10*l.* 13*s.* 2*d.*, balance of charge for preparing plans and specifications for eight houses erected on the Bramford Road, Ipswich.—Mr. Orr said he did some work for the defendant according to agreement, and subsequently defendant instructed witness to prepare plans for eight houses. He surveyed the site and prepared the plans and specifications. The plans were used by defendant, and he had them now in his possession. He (plaintiff) had only charged one and a half per cent. on the lowest tender for building the houses, 944*l.* The recognised charge was two and a half per cent., and half per cent. for obtaining the tender.—In cross-examination, plaintiff said he had received 5*l.* on account. Part of that sum was for advising the defendant in reference to a bad tenant. Defendant sought him in reference to this work. Defendant said the estimates were much too high, as he wanted houses to let at 3*s.* and 3*s.* 6*d.* per week. Witness left the plans, and told him the charge was three per cent. Defendant said the cost was too high, and he could not undertake the job. He did not then tell the defendant that the charge for what he had done was 3*l.* 10*s.* He received on that occasion 5*l.* He told defendant that the cost of advertising for tenders would be 10*s.*;



he did not suggest that the tender should come to his (plaintiff's) house—it was done in the usual course of business. Witness met defendant again, and the latter stated that the cost was too high. He could not undertake the work. At that time nothing was said about charge for the plans. On April 5, 1883, defendant claimed the plans, on the ground that he had paid for them, and witness let him have them. Defendant commenced the erection of the houses soon afterwards; witness did not claim to superintend the work. He had received a letter from defendant during March as follows:—"I know I paid you a small sum of money, and I would have paid you some time ago, but you refused to tell me what would satisfy you. If you like to make a fair and proper bill I will pay you."—His Honour: Then I have to decide what is a fair and proper bill?—Re-examined: I have always disputed that the 5*l.* I received included payment for the plans.—A son of the plaintiff deposed to hearing a conversation between his father and defendant, during which they agreed upon 30*s.* as the charge for some previous work. The 3*l.* 10*s.*, which, with the 30*s.*, made up the 5*l.* received, was on account for the preparation of the plans.—For the defence it was alleged that, before anything was done, plaintiff informed defendant that the cost of the plans would be from two to three guineas. When the plans were prepared and estimates drawn out, defendant said the cost was too much. Plaintiff informed the builders who tendered that the work was abandoned, and there was an end of the matter. There was no evidence that the plans prepared by plaintiff had been used.—His Honour said eight houses, costing 1,000*l.*, and letting at 3*s.* or 3*s.* 6*d.* per week, would bring in 7½ per cent. He did not think the houses could be erected much cheaper. The letter showed that defendant thought he had not fully paid for the plans.—The defendant was examined, and said the plaintiff told him when he first consulted him that the cost of the plans would be 2*l.* 2*s.*, and the specifications 1*l.* He had paid that sum. When he paid the 5*l.* he believed he had cleared everything. The eight houses he had erected had cost 840*l.* Plaintiff did not superintend the erection of the houses, nor did he make any application to be allowed to carry out what he had now alleged to be an agreement. Witness was aware that he owed something to plaintiff for receiving the tenders and advising him in reference to them. That was what he referred to in the letter he had written to plaintiff.—His Honour said it was quite clear that defendant did not pay 3*l.* 3*s.* for the plans, and that he left that open. The builder proceeded with the houses without consulting any other architect, and he had no doubt worked upon a modification of the plans prepared by the plaintiff. He thought the plaintiff's charge a fair one, and he gave judgment for the amount claimed, with costs.

#### Huddersfield County Court.—June 12.

(Before Mr. SNAGGE, Judge.)

HANSON *v.* ELAND & HOLDSWORD.

MEASUREMENT OF MASON'S WORK.

The plaintiff in the case was a builder, and he sued defendants, who are joiners, for 50*l.*, balance of an account for labour done and materials supplied. In May 1883 the plaintiff agreed to do the mason's work for the erection of eight cottages. There was no contract, but plaintiff proceeded to do the work, and based his charges upon certain bills of quantities. After the work was completed there was some dispute about the measuring, the principal dispute arising out of the charge for the openings left for the windows, which the plaintiff charged for as if they were solid work, and also for the headers and corners. As an agreement could not be arrived at, plaintiff made his own measurements and sent in his bill for the balance due to him.—Mr. Thomas Lister Patchett, architect, Halifax, who had been carefully over the work, stated that the plaintiff's measurements were correct.—One of the defendants alleged that there was a contract, and it was made upon a Sunday. He said there was an agreement that the openings were not to be charged for, as payments were to be made for the headers and corners.—His Honour gave a verdict for the amount claimed, with costs.

#### ART WORKMANSHIP.

**Stained Glass.**—The west window of Stanmore church has recently been filled with very rich stained glass. The window consists of four lights and tracery, and contains the following subjects:—Christ calleth John, Mother of Zebedee's children beseeching Christ for her sons, St. John reclines on the breast of Christ, St. John leads away the Blessed Virgin from Calvary, St. John and St. Peter finding the tomb empty, St. John and St. Peter at the gate of the temple, money is brought and laid at the feet of the Apostles; St. John in the isle of Patmos. The following inscription appears at the foot of the window:—"To the glory of God and in loving memory of Leopold John Bernays, twenty-one years rector of this parish, who died October 25, 1882, aged 61, and of Mary, his wife, who died November 18, 1882, aged 57; this window is erected by the parishioners of Stanmore and other friends." The work reflects great credit on the artists, Messrs. Heaton, Butler & Bayne, of London.

#### CHURCH BUILDING AND RESTORATION.

**North Shields.**—The Free Methodist Church, North Shields, which was designed by the late John Green, of Newcastle, and is in the Italian style of architecture, is about to undergo considerable alterations and improvements, including the introduction of an ornamental pulpit platform in place of the present pulpit, and a rearrangement of the galleries. The church is also to be newly painted and decorated throughout. The committee have engaged Mr. J. D. Lish, architect, Newcastle-upon-Tyne, to carry out the works.

**Parbold.**—The ceremony of consecrating and dedicating the fine new Roman Catholic Church of Our Lady and All Saints, at Parbold, was held on Wednesday and Thursday in the last week of May. The church is the gift of Mr. Hugh Ainscough, of Parbold, and has cost altogether the sum of 15,000*l.*, and Mr. Ainscough, in addition, has given a large plot of land for a burial ground, and also built a substantial presbytery for the pastor. The church is in the Gothic style of architecture, and surmounted by a tall steeple which can be seen for miles around. The building is entirely of local stone. Internally it has a bright, cheerful appearance which corresponds well with the beauty of the outside aspect. The roof is supported by two rows of plain, massive pillars, and the fittings are most elaborate and complete. The altar especially is a grand piece of workmanship, being constructed of marble and alabaster, and the altar window is large and ingeniously carved. The altar and reredos have been executed by Messrs. Sherratt & Ovens, of Preston. The church has been built from designs by Mr. Edmund Kirby, architect, of Liverpool, and the building operations have been carried out by the workpeople employed by Mr. Ainscough. At the present time there are sittings for 400 people, but the church is capable of accommodating 500. The bells are from the foundry of Messrs. Mears & Staenbank, of London.

**Rollesby, Norfolk.**—On the 10th inst. the parish church of Rollesby, near Great Yarmouth, was reopened after restoration by the Lord Bishop of Norwich. The works have been successfully carried out by Mr. Hubbard, of East Dereham, from the designs and under the superintendence of Mr. Arthur S. Hewitt, A.R.I.B.A., Yarmouth, and comprise new oak roofs to nave, aisles, and porch, being reproductions of the old ones, which were so decayed that their retention was impossible. The main timbers of the nave and porch are richly moulded with carved bosses at the intersections, the nave is covered with Edwards's tiles from Ruabon, the aisles and porch with lead. Stone tracery has been inserted in several windows in lieu of wood frames; the high box pews have given place to open benches of pitch pine, and under these the floor is laid with Gregory's wood blocks and encaustic tiles in the aisles. Provision has been made for Porritt's heating apparatus. A niche in the porch has been opened out exposing some delicate tracery; also two stoups, which were discovered under the whitewash, and a squint in north jamb of chancel arch. The base of the font has been restored, and a new bowl of Beer stone, supported on Purbeck marble shafts, has replaced one of brick and plaster of recent date.

#### SCHOOL BUILDINGS.

**Ryton-on-Tyne.**—The Thorp Schools, Ryton-on-Tyne, which were erected by the late Archdeacon Thorp, are about to be enlarged, and new porches and lavatories added, whilst the playgrounds are to be thoroughly drained, to render the schools more in harmony with modern sanitary requirements. Mr. J. D. Lish, Newcastle-upon-Tyne, is the architect.

**Greenside.**—The vicar and managers of the Greenside schools, feeling the need of better sanitary arrangements in these schools, and more school accommodation, have determined upon large extensions and alterations to meet these requirements, and have placed the works in the hands of Mr. J. D. Lish, architect, Newcastle-upon-Tyne, under whose superintendence they will be carried out.

**Fall of a School Building.**—On the 11th inst., a part of the school building in course of erection at Malvern Wells gave way, and a labourer was buried beneath the masonry. At the inquest, the architect, Mr. C. W. Stephens, of London, and Mr. Smart, builder, of Malvern, attributed the fall of the building to the late heavy rains, causing an overflow in a drain running under the structure and washing away some of the ground. The school is built on the hill side. The architect added that when the work was commenced in February he was given to understand by the builder that a drain crossed the angle of the site, and emptied into a tank considerably below the building site; but that the drain did not pass at all under the building. Since the building had been in progress, the builder had reported to him that there was another drainage tank, of which he had been previously unaware, five feet from the angle of the building that had fallen. The tank which had previously been seen proved to be the overflow tank, and they did not expect to find a second one. Having regard to the drain and the tank being so near the building, an excessive rainfall



would be likely to endanger the building. If he had known of the nearer tank he would have filled it up and had another tank formed lower down the hill. The drain was mentioned in the deed of conveyance, but there was nothing to show the existence of the nearer tank into which the drain flowed. The jury found that deceased met his death by the fall of a portion of the new schools, and that the fall was due to the overflow of a drain loosening the foundation. The jury expressed their regret that more care was not exercised to ascertain the position of existing drains, and strongly recommended the passing of a law making the registration of drains compulsory.

**Walton.**—The foundation-stone of the first schools to be erected by the Walton School Board has been laid. The schools will cover an area of about 3,000 square yards, and are intended to accommodate about 1,500 children, who will be divided into four nearly equal sections, namely, senior boys, senior girls, juniors mixed, and infants. The several rooms will be so arranged as to admit of their being lighted and ventilated on both sides. It is intended that the upper storey shall be utilised as a cookery school for girls. The architect is Mr. Edmund Kirby, of Union Buildings, Cook Street, Liverpool, and the contractor, Mr. Thomas Ray, of Seel Street, Liverpool.

### WORKS IN PROGRESS.

**The Corporation of Hertford** has just decided to adopt the tube well system for the waterworks of the town. There being ample water-power obtainable from the local stream, a water-wheel will be the motive force to raise the water up into the reservoir. This makes the sixth town waterworks provided with its supply by the system of Messrs. Le Grand & Sutcliffe.

**Mr. Renton Gibbs**, of Liverpool, has received instructions to fix his patent furnace at St. Mark's churchroom, Tollington Park, Holloway; and has also received instructions to fix his patent boiler for heating the national schools at Ulverston.

**Painswick, Gloucester.**—It will be remembered that the spire of this church was some months ago struck by lightning, and that in its fall it damaged the celebrated ring of twelve bells, the finest, it is said, in Gloucestershire. The bells have now been taken down and put in thorough ringing order, and rehung by Messrs. Llewellyns & James, Bristol, who also rearranged the chiming apparatus, which had been greatly damaged when the bells fell.

### SANITARY WORK.

**Glasgow Water Supply.**—It is proposed to increase the quantity of water supplied to Glasgow by extending the Loch Katrine Works. Mr. Gale, in his report to the Corporation, says:—There is no nearer point in the district than Loch Katrine from which the water can be drawn, and it is so situated that the water from the other lakes in the locality that are at a higher level can be drawn into it. A new aqueduct from Loch Katrine will, therefore, be the chief feature of the proposed extension of the waterworks. It will be on the same level, and will follow very nearly the line of the present aqueduct, at a distance of from 20 to 25 yards further into the hillside, both in the valley of the Forth, where the aqueduct is on the west side, and in that of the Blane, where it is on the east side of the valley, so that the new aqueduct will have to cross the present one; and I propose to make that crossing where the cast-iron pipes occur in the Endrick Valley. The necessity of constructing the new aqueduct further into the hillside will increase the extent of tunnelling, but for a considerable part of the length where the rock is hard this is the least expensive mode of construction that could be adopted, and in the part where the rocks are softer, it will be more permanent and enduring, and more easily made watertight, both from within and without, than where it is formed in open cutting. The supply to the city will then be raised to 75 million gallons per day from Loch Katrine. The surveys required to enable me to make a detailed estimate of the cost of these works have not yet been entered upon; but by assuming certain increases upon the actual cost of the existing works I estimate that the whole could be completed for 950,000*l.*, including land and compensations, but excluding Parliamentary, law, and engineering expenses, which will probably raise the total cost to one million sterling. These works, however, present the unusual feature that their execution can be spread over a lengthened period of time. There is no reason why the construction of the works should not be spread over twenty years, making an average outlay of 50,000*l.* each year; and, with a revenue increasing so rapidly as yours is, the whole can be done without adding in the least to the present rates.

**A Memorial** to the late Earl of Stamford and Warrington has been erected at Enville Church. It consists of a carved oak screen for the chancel, from designs by the late Sir Gilbert Scott, and of a clock for the tower of the church.

### GENERAL.

**Sir Frederick Leighton**, President of the Royal Academy, has consented, at the invitation of the Master and Court, to become one of the liverymen of the Painter Stainers' Company.

**An Art Loan Exhibition** was opened at Guildford on Monday in the County and Borough Hall. Besides objects of unusual artistic and archaeological interest, there is a choice collection of paintings and examples of ancient tapestry.

**The Exhibition of Pictures** at the Manchester City Art Gallery closes to-day (Saturday), and preparations will be made for the annual autumn exhibition of works of modern artists, to be opened in the first week in September. In selecting and hanging the works sent for exhibition the Art Gallery Committee have secured the assistance of Mr. E. J. Gregory, A.R.A.

**Mr. E. F. A. Spratt, A.R.I.B.A.**, has removed from South Square, Gray's Inn, to No. 7 Bloomsbury Square.

**Mr. J. H. Barclay, R.S.A.**, has been elected treasurer of the Royal Scottish Academy, in the room of the late Mr. Perigal.

**A Design** for a new statue of Queen Anne, in white Sicilian marble, which, by the generosity of the Corporation, will replace the effigy which has for so many years disfigured the front of St. Paul's, has been approved by the Archbishop of Canterbury, the Bishop of London, and the Lord Mayor, M.P., as trustees of the fabric of the cathedral.

**The Chadwick Museum** in Bolton, which has been erected by the munificence of the late Dr. Chadwick, has been opened. It contains a fine collection of art treasures, loan reproductions from South Kensington, and articles contributed by the leading firms of cotton-spinners in the town. Mr. Thomasson, M.P., has also furnished one room with pictures. The museum is not to be open on Sundays.

**A Stained-glass Window**, to cost 500*l.*, is to be placed in Salisbury Cathedral as a testimony of the regard felt in Wiltshire for the late Duke of Albany.

**The Curators of the Bodleian Library** have been authorised to expend 850*l.* in fitting up the philosophy and music school of the old schools as part of the library.

**Mr. Elliot Stock** has two fresh *fac-similes* in course of production—the first editions of the "Vicar of Wakefield" and of Johnson's "Rasselas." The former will be issued very shortly. A limited number of copies will be bound in wood taken from the panels of the dining-room of Dolly's chop-house—one of the haunts of Goldsmith, Garrick, and Johnson—when that tavern was recently pulled down.

**Mr. J. C. Thompson**, headmaster of the Warrington School of Art, has sent in his resignation. Mr. Thompson has been master of the school since the year 1855, a period of nearly thirty years.

**Funds** have been subscribed for the erection of a new theatre and opera house in Dundee.

**Messrs. J. L. Bacon & Co.** have obtained the contracts for heating Upton Church, Essex, and Celbridge Church, co. Dublin.

**The Old-established Firm of Hodgkinson & Clarke**, of Small Heath, Birmingham, is about to be formed into a limited company with a capital of 60,000*l.* The prospectus states that the business has been very largely extended, and additional capital is required to meet the increased demand which has arisen for the specialities which have recently been brought out at Canada Works. The new company, in addition to carrying on the patent blind business, will also manufacture and erect revolving shutters, school furniture, educational appliances, stained and painted glass, and hoisting and lifting machinery.

**A Prospectus** has just been issued of the Lancaster Park Hotel (Hydropathic) and High Harrogate Land Company. It is proposed to raise a capital of 100,000*l.* in twenty thousand shares of five pounds each. The object of the company is the purchase of Lancaster Park, High Harrogate, and to build thereon an hotel combined with a hydropathic establishment. The surplus land will be sold for building purposes. It appears from the prospectus that several similar speculations in the same neighbourhood are paying from 10 to 20 per cent., and it is confidently expected by the promoters that a similar success will attend the new venture.

**Steam Tramways for the Metropolis.**—An order for fifteen steep gradient tramway locomotives has just been placed with Messrs. Merryweather & Sons, of Greenwich, for use on the North London Tramways. This decision was arrived at by the directors in view of the satisfactory results secured in the use of steam as a motive power for tram-cars in the provinces. It is now some twelve years ago that Messrs. Merryweather & Sons constructed their first steam tramway engine for Mr. Grantham, and since that time the economy and practical value of steam on tramways have been demonstrated in all parts of the world. It may be mentioned that the engines of this firm have been selected before those of several competitors on account of their economy in working and low cost of repairs, great safety in running owing to the use of powerful brakes and efficient speed governors, entire absence of steam and smoke, &c.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JUNE 21, 1884.

### CONTRACTS OPEN.

**ASHTON.**—June 27.—For Additions to Haydock Lodge Retreat. Mr. George Heaton, Architect, Wigan.  
**ASHTON-UNDER-LYNE.**—June 28.—For Building Pair of Semi-detached Villas. Messrs. T. D. & J. Lindley, Architects, Henry Square, Ashton-under-Lyne.  
**ASHTON-UNDER-LYNE.**—June 28.—For Taking Down Tower of Parish Church and Building New Tower. The Clerk of Works, Manchester Cathedral.  
**BARLINNIE.**—June 25.—For Building Governor's House, &c. Prison Commissioner's Office, 130 George Street, Edinburgh.  
**BARTON.**—July 1.—For Rebuilding Bridge. Mr. W. Radford, Bridgemaster, 1 Princess Street, Manchester.  
**BLAENAVON.**—June 30.—For Building Chapel. Mr. S. Barwell, William Street, Blaenavon.  
**BOURNEMOUTH.**—For Building Villa. Mr. H. E. Hawker, 5 & 7 Town Hall Chambers, Bournemouth.  
**BRIGHOUSE.**—June 30.—For Building Chapel. Mr. John Judson, Architect, Bogthorn, Keighley.  
**BROMSGROVE.**—July 8.—For Building Infirmary at the Workhouse. Mr. C. A. Edge, Architect, 21 Bennett's Hill, Birmingham.  
**CARDIFF.**—For Building School and Class-rooms. Messrs. W. G. Habershon & Fawcner, Architects, Pearl Street, Cardiff.  
**CHESHAM.**—June 25.—For Building House. Messrs. J. & E. Reynolds, Blucher Street, Chesham.  
**EARLSDON.**—June 30.—For Additions to Inn. Mr. T. W. Whitley, Architect, Bank Chambers, High Street, Coventry.  
**GREAT YARMOUTH.**—June 30.—For Building Class-room to School. Messrs. Bottle & Olley, Architects, Regent Street, Great Yarmouth.  
**HALIFAX.**—July 5.—For Building Residence, Stabling, Coachhouse, &c. Messrs. Horsfall & Williams, Architects, Post-Office Buildings, Halifax.  
**HAVERFORDWEST.**—July 9.—For Restoration of North Aisle and North Clerestory of St. Mary's Church. Mr. Ewan Christian, Architect, 8A Whitehall Place.  
**HOGGESTON.**—June 30.—For New Buildings and Repairs on Mayne's Hill Farm. Mr. J. T. Lawrence, Architect, Bridge Street, Leighton Buzzard.  
**HOLME.**—June 24.—For Roofing Nave and Repairing Chancel of Church. Messrs. W. Adams & Son, Architects, King's Lynn.  
**HUDDERSFIELD.**—June 25.—For Restoring Warehouse damaged by fire. Messrs. John Kirk & Sons, Architects, Huddersfield.

**HEREFORD.**—For Additions to Lucton Foundation School. Mr. F. R. Kempson, Architect, Hereford.  
**LIVERPOOL.**—June 23.—For Building School for 1,316 Children. Mr. T. Mellard Reade, Architect, 4 South John Street, Liverpool.  
**MILTON.**—July 5.—For Building Three Shops and large Hall. Mr. T. B. Lillywhite, Architect, Market Square, Milton.  
**NEW BRIGHTON.**—June 26.—For Erection of Shelter Houses, &c., on Landing Stage. Mr. A. Dawson, C.E., 3 Great Queen Street, Westminster.  
**NEWMARKET.**—June 28.—For Building House, Cottage, Meter-house, &c. Mr. John Flatman, Architect, Kingston Villa, Station Road, Newmarket.  
**PARK STREET, HERTS.**—July 1.—For Building Bridge. Mr. Urban A. Smith, County Surveyor, Hertford.  
**PILLING.**—July 2.—For Building Church. Mr. W. Wright, Surveyor, Lancaster.  
**PRESTON.**—July 2.—For Building Presbyterian Church. Mr. Joseph Harding, 49 Lane Street, Preston.  
**PURTON.**—June 24.—For Alterations to Dwelling-house and Premises. Mr. Orlando Baker, Architect, 38 Regent Street, New Swindon.  
**RAWDON.**—June 30.—For Building School. Messrs. T. H. & F. Healy, Architects, Tyrrel Street, Bradford.  
**RICHMOND.**—For Building Seven Houses. Mr. Edgar Sage, Architect, 106 Sinclair Road, Kensington, W.  
**SANTHORPE.**—July 10.—For Building Cemetery Chapel, Mortuary, Lodge, Entrance Gates, and Palisading. Mr. Robert Clamp, 5 Land of Green Ginger, Hull.  
**SAWREY.**—June 30.—For the Erection of Villa Residence. Mr. Eli Cox, Architect, 22A Highgate, Kendal.  
**SHEFFIELD.**—June 25.—For Building Police Station. Mr. J. Vickers Edwards, West Riding, Surveyor, Wakefield.  
**SOEWERY BRIDGE.**—June 23.—For Building School. Mr. W. H. D. Horsfall, Architect, Albany Chambers, Commercial Street, Halifax.  
**STAFFORD.**—For Building School. Mr. R. Griffiths, Architect, Greengate Street, Stafford.  
**SUTTERTON.**—June 24.—For Rebuilding Four Bridges. Mr. R. W. Staniland, Clerk of Sewers, High Street, Boston.  
**SWINDON.**—June 25.—For Building Girls' School. Mr. Brightwen Binyon, Architect, Princess Street Chambers, Ipswich.  
**WEST VALE.**—June 24.—For Building House. Mr. W. H. D. Horsfall, Architect, Albany Chambers, Commercial Street, Halifax.  
**WIGAN.**—July 2.—For Erection of a New Post Office. Mr. A. B. Milford, H.M.'s Office of Works, London.

**WEST BROMWICH.**—June 27.—For Boundary Walls, Waterclosets, Lavatory, Drainage, &c., at the Workhouse. Mr. W. Henman, Architect, 38 Bennett's Hill, Birmingham.  
**WINDHILL.**—June 24.—For Building Block of Schools, &c. Mr. Samuel Wright, Architect, Church Street, Swindon.

### TENDERS.

#### ABINGDON.

For Erection of a New Stable, on the Duchy of Cornwall Estate, at Shippin, Abingdon, for H.R.H. the Prince of Wales. Mr. J. G. T. West, Architect, Abingdon.  
 WILLIAMS, Abingdon (accepted) . . . £122 0 0

#### BANGOR.

For Supplying and Erecting Iron Tank and Gasholder, 62 feet in diameter and 28 feet deep, at the Gasworks, Bangor.  
 Piggot & Co, Birmingham . . . £2,355 0 0  
 Newton, Chambers & Co., Sheffield . . . 2,120 0 0  
 Willey & Co., Exeter . . . 2,021 0 0  
 Porter & Co., Lincoln . . . 2,007 12 0  
 HOLMES & Co., Huddersfield (accepted) . . . 1,978 0 0

#### BIRMINGHAM.

For Patent Hot Water Heating Apparatus for Mr. G. Barrow, Fernside, Ampton Road, Edgbaston.  
 Gibbs, Liverpool.

#### CARDIFF.

For the Erection of School-Chapel in May Street, for the Welsh Calvinistic Methodists. Mr. J. P. Jones, Architect, 25 Park Street, Cardiff.  
 Davies, 12 Woodville Road . . . £189 0 0  
 Jones, Great Frederick Street . . . 475 0 0  
 Grey, Flora Street . . . 475 0 0  
 WILLIAMS, 39 Envy's Road (accepted) . . . 456 16 0  
 For Alterations to the Theatre Royal, Cardiff. Messrs. BLESSLEY & ASPINALL, Architects.  
 Simmonds & Co. . . £1,021 0 0  
 SHEPTON & SON (accepted) . . . 981 9 0

#### CARLISLE.

For Building Two Semi-detached Villas, Carlisle. Mr. JAMES MURCHIE, Architect, Carlisle.  
 Accepted Tenders.  
 Beatty, builder . . . £620 0 0  
 Hewitt, joiner . . . 390 0 0  
 Anderson, plumber . . . 103 17 8  
 Topping & Johnston, plasterer . . . 81 0 0  
 Smith & Son, slater . . . 68 0 0  
 Blacklock, painter and glazier . . . 46 0 0  
 Total . . . £1,298 17 8

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

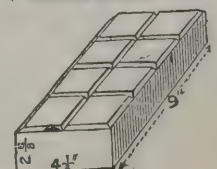
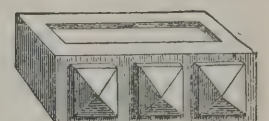
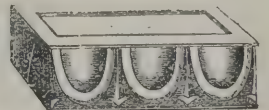
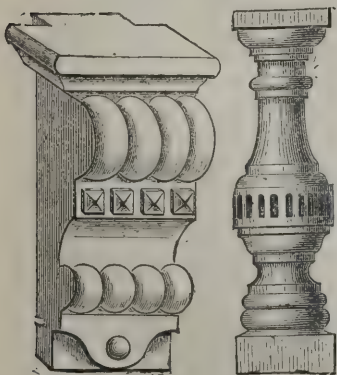
TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a Semi-Vitreous nature, will maintain a clean and washable surface.

## FACING BRICKS AND BRICK ORNAMENT OF TRUE TERRA-COTTA, AS ALSO ARCHITECTURAL WORK, IN WHITE AND WARM-TINTED BUFF.

Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





**CARMARTHEN.**

For Building New Coachhouse at Wenallt, Carmarthen, for Mr. R. B. Carver. Mr. GEO. MORGAN, Architect, Carmarthen.  
THOMAS (accepted) . . . . . £153 0 0

**CARSHALTON.**

For Making-up Station, Palmerston and Gurney Roads, under Section 150 of the Public Health Act, for the Local Board, Carshalton, Surrey. Plans, &c., prepared by Mr. T. LOCKWOOD HEWARD, Surveyor to the Board.

*Station Road.*

Etheridge, Croydon . . . . . £140 0 0  
Streeter, Croydon . . . . . 125 0 0  
Surveyor's estimate . . . . . 122 0 0

*Palmerston Road.*

Etheridge . . . . . 112 9 8  
Streeter . . . . . 96 0 0  
Surveyor's estimate . . . . . 101 0 0

*Gurney Road.*

Streeter . . . . . 95 0 0  
Etheridge . . . . . 86 0 0  
Surveyor's estimate . . . . . 94 0 0

**COLWYN BAY.**

For Construction of Works for the Colwyn Bay and District Gas and Lighting Company.  
Horns & Co., Huddersfield (accepted) . . . £3,244 4 0  
Griffiths & Thomas, Bangor . . . . . 3,189 0 0  
Willey & Co., Exeter . . . . . 3,120 0 0

**CORK.**

For Building Tower and Spire to Douglas Church, near Cork. Messrs. W. H. HILL & W. C. RYDER, Architects, Cork.  
Delany . . . . . £2,601 0 0  
HILL (accepted) . . . . . 2,294 0 0

**GORING.**

For Erection of a New Farmhouse at Grove, Goring, for Mr. Charles Gardiner. Mr. W. RAVENSCROFT, Architect, 6 Market Place, Reading. Quantities by Messrs. Cooper & Sons, Reading and Maidenhead.  
Higgs, Goring (accepted) . . . . . £1,195 0 0

**HALIFAX.**

For Patent Heating Apparatus, Silver Street, Gibbs, Liverpool.

**HIGH WYCOMBE.**

For Erection of New School and Class-rooms, Construction of Organ-chamber, Painting, Decorating, &c., at the Union Chapel, High Wycombe. Mr. ARTHUR VERNON, Architect, 26 Great George Street, Westminster, and High Wycombe.  
Taylor & Grist . . . . . £1,819 0 0  
Snell . . . . . 1,267 0 0  
Woodbridge . . . . . 1,247 0 0  
Idenden . . . . . 1,221 0 0  
Cooper . . . . . 1,187 0 0  
Woods . . . . . 1,178 0 0  
Harris . . . . . 1,130 0 0  
Nash . . . . . 1,056 0 0  
Hunt . . . . . 1,053 0 0  
GIBSON (accepted) . . . . . 1,045 0 0

**HONOR OAK.**

For Completion of Branksomdene, Honor Oak, S.E., for Mr. E. P. Trenchard. Mr. HERBERT D. APPLETON, A.R.I.B.A., Architect, The Wool Exchange, E.C.  
Air & Son . . . . . £935 0 0  
Holloway . . . . . 658 0 0  
Redman . . . . . 625 0 0

**HORLEY.**

For Building Dairy and Alterations to Barn, Stable, Cow, and other Sheds at the Glebs Farm, Horley, Oxon. Mr. J. C. EGAR, Architect, Banbury. Quantities by the Architect.  
Claridge, Banbury . . . . . £689 0 0  
T. & S. Orchard, Banbury . . . . . 549 0 0  
Bailey, Leamington . . . . . 537 0 0  
Grant, Grimsbury . . . . . 523 0 0  
T. & J. LAMBERT, Cropredy (accepted) . . . . . 498 16 0

**KIDWELLY.**

For Building New School, Teacher's House, &c., at Myavdd-y-garreg, Kidwelly, Carmarthenshire, for the St. Mary, Kidwelly, U.D., School Board. Mr. GEORGE MORGAN, Architect, Carmarthen.  
Evans & Reynolds . . . . . £1,907 8 0  
Randel . . . . . 1,460 0 0  
Hughes . . . . . 1,360 0 0  
BROWN, THOMAS & JOHNS, Llanelly (accepted) . . . . . 1,108 0 0

**KIRKCALDY.**

For Laying Granite Paving (6,000 yards super). Mr. JNO. JOHNSTONE, Borough Surveyor, Kirkcaldy.  
Thorburn, Edinburgh . . . . . £6,108 0 0  
Gowans, Edinburgh . . . . . 5,300 15 0  
Millan, Glasgow . . . . . 4,913 6 8  
Mackay & Son, Elie . . . . . 4,535 9 2  
Dobson, Edinburgh . . . . . 4,357 18 4  
Worth & Strachan, East Wemyss . . . . . 4,226 5 10  
Duncan, Leith . . . . . 4,065 3 4  
Brehner, Edinburgh . . . . . 4,053 2 6  
Connolly, Kirkcaldy . . . . . 4,064 10 8  
J. & W. Torrance, Kirkcaldy . . . . . 3,962 16 8  
Coulis, Kirkcaldy . . . . . 3,926 16 8  
McKuvie, Bathgate . . . . . 3,898 15 10  
Leith, Aberdeen . . . . . 3,897 13 4  
Scott, Inverness . . . . . 3,886 7 6  
Shaw, Edinburgh . . . . . 3,857 6 8  
Sinclair, Banff . . . . . 3,851 8 4  
Dobbie, Leith . . . . . 3,847 13 4  
Bowden, Edinburgh . . . . . 3,844 5 10  
J. W. & G. Stratton, Edinburgh . . . . . 3,824 13 4  
L. & W. McDonald, Inverkiething . . . . . 3,622 10 10

**KILWENDEAGE.**

For Additions and Alterations to Kilwendeage Mansion, Pembrokehire, for Mrs. Saunders Davies. Mr. GEORGE MORGAN, Architect, Carmarthen.  
WILSON, Cardigan (accepted) . . . . . £2,112 0 0  
Plumber's work and conservatories not included.

**LIVERPOOL.**

Liverpool Zoological Gardens. Contract No. 7. Dog Kennels. Messrs. W. SUGDEN & SON, Architects, Leek.

*(A) Structural Works.*

Everton Quarry Company, Liverpool . . . £865 0 0

*(B) Concreting.*

Hutchison & Co., Clayton, Manchester . . . 98 19 6

*(C) Ironwork.*

Worrall & Co., Liverpool . . . . . 125 11 10

The above accepted subject to certain omissions and reductions.

**LLANGUIMOCK.**

For Building Additions to Llanguimock Vicarage, Carmarthenshire, for Rev. T. Lewis. Mr. GEORGE MORGAN, Architect, Carmarthen.  
DAVIES, Penlanfach, Llanguimock (accepted) £131 0 0

**LLECHRYD.**

For Building Residence near Llechryd, Cardiganshire, for Mr. J. W. Stephens, J.P. Mr. GEORGE MORGAN, Architect, Carmarthen.  
Williams . . . . . £2,343 0 0  
Griffiths & Thomas . . . . . 2,080 0 0  
Woodward . . . . . 1,795 0 0  
Jones . . . . . 1,690 0 0  
WILSON, Pendre, Cardigan (accepted) . . . . . 1,475 0 0

Proprietor finding considerable portion of materials and haulage.

**LONDON.**

For Building Six Houses and Road-making, Marlborough Place, Old Kent Road, for Mr. C. G. Cleaver. Mr. H. STAPLEY, Architect, Wool Exchange, E.C.  
BREWER (accepted), schedule of prices.

For Alterations to Bar, &c., to the Castle Hotel, Camberwell, and Making Entrance to Music Hall from Camberwell Road, for Mr. A. J. Deer. Mr. H. STAPLEY, Architect, Wool Exchange, E.C.

WALKER & PEARCE (accepted), exclusive of  
Pewtering, Glazing, and Gasfitter's work . £185 0 0

For Alterations to the Bull's Head, Chandos Street, W. Mr. J. ENGLAND, Architect.  
Shurmur . . . . . £855 0 0  
Beale . . . . . 785 0 0

For Road and Sewer, Egerton Road, Stamford Hill. Mr. J. HAMILTON, Surveyor, 202 Bishopsgate Street Within.  
Bloomfield . . . . . £615 0 0  
Jackson . . . . . 570 0 0  
Bell . . . . . 558 0 0  
POTTER (accepted) . . . . . 474 0 0

For Construction of 4 ft. by 2 ft. 6 in. Brick Sewer, Berkley Street, Clerkenwell. Mr. W. IRON, Surveyor.  
Mowlem & Co. . . . . £580 0 0  
Walker . . . . . 519 0 0  
Adams . . . . . 539 0 0  
Neave & Son . . . . . 470 0 0  
Wilkinson Bros. . . . . 477 0 0  
Pizzey . . . . . 465 0 0

For Repairing and Decorating the Caledonian Road Congregational Church.  
Austin . . . . . £447 0 0  
Colwill . . . . . 429 0 0  
Toombs . . . . . 425 0 0  
Williams . . . . . 373 0 0  
Coote . . . . . 350 0 0  
Campion . . . . . 319 0 0  
Riches & Mount . . . . . 310 0 0  
Webber . . . . . 291 0 0

For Erection of New Premises, No. 64 Basinghall Street, E.C. Mr. RICHARD M. ROE, A.R.I.B.A., Architect, 57 Basinghall Street. Quantities supplied by Messrs. Batstone Bros.  
Mowlem & Co. . . . . £4,051 0 0  
Green . . . . . 3,585 0 0  
Colls & Sons . . . . . 3,643 0 0  
Conder . . . . . 3,020 0 0  
Ashby & Horner . . . . . 3,583 0 0  
Lawrance & Sons . . . . . 3,523 0 0  
Grover . . . . . 3,484 0 0  
LARKE & SONS (accepted) . . . . . 3,370 0 0

For the Erection of Buildings, Edgware Road, Brondesbury, N.W. Mr. GEORGE EDWARDS, Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.

Reating . . . . . £2,725 0 0  
Woodward . . . . . 2,615 0 0  
Hunt . . . . . 2,690 0 0  
Sanders . . . . . 2,580 0 0  
Nightingale . . . . . 2,509 0 0  
Scriveners & Co. . . . . 2,512 0 0  
Stimpson & Co. . . . . 2,410 0 0  
Martin, Wells & Co. . . . . 2,388 0 0  
Patman & Fotheringham . . . . . 2,373 0 0  
Green . . . . . 2,335 0 0  
SCHARIEN & WILLIAMS (accepted) . . . . . 2,268 0 0

For Entrance Gates, Store Delivery Rooms, Waiting Rooms, Road-making, &c., at the South-Western Fever and Smallpox Hospitals, Landor Road, Stockwell. Mr. M. WYATT, Architect, 77 Great Russell Street, W.C.

Mayo . . . . . £2,150 0 0  
Sawyer . . . . . 1,991 0 0  
Mowlem & Co. . . . . 1,965 0 0  
Schofield & Co. . . . . 1,865 0 0  
Wall Bros. . . . . 1,791 0 0  
Aldridge & Jenvey . . . . . 1,745 10 0  
Lorden & Son . . . . . 1,645 0 0  
HAMMOND (accepted) . . . . . 1,585 0 0  
Kent Bros. . . . . 1,261 0 0

**LONDON—continued.**

For Erection of Ten Shops at the Central Fish Market, for the Corporation of the City of London.

Egan	£2,078	0	0
Brian	1,337	10	0
Burrough	1,329	0	0
Good	1,193	0	0
Ansell	1,164	0	0
Jeffries	1,148	0	0
Mowlem	1,100	0	0
Mark	1,070	0	0
Mower	1,050	0	0
Building Company	1,042	0	0
Scharien & Williams	998	0	0
Shurmur	990	0	0
Webb & Rolfe	945	0	0
Hunt	933	0	0
Gentry	905	0	0
Green	779	0	0

For Erection of Foundry, Pattern Shop, Warehouse, &c., in Tabard Street, S.E. Messrs. GEORGE LANSDOWN & HARRIS, Architects. Quantities furnished.

General Building		Ironwork of
Works.		Roofs.
Higgs & Hill	£4,030 0 0	£1,230 0 0
Downs	3,950 0 0	1,240 0 0
J. & J. Greenwood	3,601 0 0	1,588 0 0
Kirk & Randall	3,816 0 0	1,262 0 0
Rider & Son	3,680 0 0	1,250 0 0
Wall Bros.	3,849 0 0	1,033 0 0
Shepherd	3,613 0 0	1,255 0 0
H. & E. Lea	3,729 0 0	1,000 0 0
Chappell	3,634 0 0	857 0 0
Conder	3,770 0 0	875 0 0
Hall, Bedall & Co.	3,786 0 0	854 0 0
Colls & Son	3,722 0 0	872 0 0
Canning & Mullins	3,676 0 0	809 0 0
Bird	3,460 0 0	925 0 0
TARROUT & SON (accepted)	3,434 0 0	766 0 0

For Building Board School, Eltringham Street, Chelsea.

Mr. E. R. ROBSON, Architect.

Priestley & Gurney	£16,966	0	0
Goodman	16,777	0	0
Reading	16,074	0	0
Lathey Bros.	16,024	0	0
Shepherd	16,017	0	0
Turtle & Appleton	15,995	0	0
Shurmur	15,984	0	0
Bangs & Co.	15,817	0	0
Farry & Co.	15,556	0	0
Kirk & Randall	15,477	0	0
Oldrey	15,280	0	0
Stimpson & Co.	15,276	0	0
Tongue	15,100	0	0
Wall Bros.	15,092	0	0
Hobson	15,027	0	0
Grover	15,000	0	0
Holloway	14,986	0	0
Jerrard	14,879	0	0
Down	14,783	0	0
Wall	14,766	0	0
Hart	14,670	0	0

For Enlargement of Board School, Buckingham Terrace.

Mr. E. R. ROBSON, Architect.

W. & D. McGregor	£8,013	0	0
Lathey Bros.	7,391	0	0
Bangs & Co.	7,214	0	0
Scriveners & Co.	7,185	0	0
Holloway	7,179	0	0
Kirk & Randall	7,101	0	0
Wall Bros.	7,079	0	0
Priestley & Gurney	7,010	0	0
Stimpson & Co.	6,980	0	0
Oldrey	6,920	0	0
Reading	6,890	0	0
Turtle & Appleton	6,865	0	0
Jerrard	6,770	0	0

For Covered Playgrounds at Board Schools.

*St. John's Road.*

Newton, Chambers & Co., Limited	£172	10	0
Holden & Co.	160	0	0
Lowes	121	0	0

*South Grove.*

Pritchard	910	0	0
F. & F. J. Wood	893	0	0
Sargeant	830	0	0
Atherton & Latta	810	0	0
Robey	779	0	0
Thompson & Tweed	690	0	0

*Wick Road.*

Removing and Re-erecting Iron Buildings.			
Pritchard	686	0	0
Oldrey	600	0	0
McCormick & Sons	550	0	0
Jerrard	461	0	0

**LUDLOW.**

For Building Business Premises, Ludlow, for Messrs. Smith & Co. Mr. D. W. ROBINSON, Architect, King Street, Hereford.

Cullis, Hereford	£2,403	0	0
Welsh, Hereford	2,314	0	0
Davies, Hereford	2,250	0	0
Gardener Bros., Hereford	1,900	0	0
WEALDE, Ludlow (accepted)	1,800	0	0
Bowers & Co., Hereford	1,670	0	0

**PLYMOUTH.**

For Additions, &c., to the Castle Street Board Schools, Plymouth. Messrs. HINE & ODGERS, Architects, Plymouth. Quantities by Messrs. Harvey & Paul, Plymouth.

Westaway, Devonport	£3,700	0	0
Gill, Stoke	3,600	0	0
Lethbridge & May, Plymouth	3,520	0	0
Palk & Partridge, Plymouth	3,445	0	0
Piper, Stoke	3,291	0	0
King, Plymouth	3,150	0	0
Debnam (for Matcham & Co.), Plymouth	3,145	0	0
Pethick Bros., Plymouth	3,144	0	0
Finch & Son, Plymouth	2,996	0	0
Reed, Plymouth	2,950	0	0
LAPHORNE & GOAD, Plymouth (accepted)	2,829	0	0



NANTYGLO.

For Building School for 331 Children at Nantyglo. Messrs. BLESSLEY & ASPINALL, Architects, Cardiff.		
Thomas, Abergavenny . . . . .	£3,572	0 0
Welsh, Hereford . . . . .	2,797	0 0
Williams, Blairst . . . . .	2,625	0 0
Morgan, Nantyglo . . . . .	2,574	14 0
Vaughan, Tredegar . . . . .	2,335	5 0
MORGAN, Tredegar (accepted) . . . . .	2,331	10 0
Jenkins, Brynmawr . . . . .	2,215	0 0

NEW MALDEN.

For Erection of Villa Residence at New Malden. Mr. H. MARSH, Architect.		
Johnson . . . . .	£3,291	0 0
Shurmer . . . . .	2,581	0 0
Lee & Co. . . . .	2,399	0 0
Nye . . . . .	2,144	0 0
Lane . . . . .	1,858	10 0
Aldridge & Co. . . . .	1,823	16 0

OSWESTRY.

For Building Aërated Waterworks, Oswestry. Mr. E. BREMNER-SMITH, Architect.		
Pardo, Oswestry . . . . .	£440	0 0
Gibbons, Manchester . . . . .	431	0 0
W. & G. THOMAS, Oswestry (accepted) . . . . .	429	0 0
Gethin, Shrewsbury (withdrawn) . . . . .	386	0 0

RASTRICK.

For the Erection of a Residence at Spout, Rastrick, Yorks, for Mr. F. Sutcliffe, of Rastrick. Mr. R. F. ROGERSON, Architect, Brighouse.

Joiners.

Rayner, Rastrick . . . . .	£228	0 8
Sykes & Sons, Brighouse . . . . .	219	0 0
Bell & Shaw, Rastrick . . . . .	216	0 0
Bottomley, Rastrick . . . . .	212	0 0
Wright, Brighouse . . . . .	210	0 0
CROWTHER, Brighouse (accepted) . . . . .	200	0 0
Bentley, Rastrick . . . . .	200	0 0

Plumbers and Glaziers.

Garton, Huddersfield . . . . .	99	15 0
Brooke, Brighouse . . . . .	97	0 0
LAWSON, Brighouse (accepted) . . . . .	94	10 0

Plasterers.

Clarke, Rastrick . . . . .	52	0 0
Brearely, Rastrick . . . . .	48	15 0
Gledhill & Barraclough, Brighouse . . . . .	47	10 0
Heponstall, Brighouse . . . . .	46	6 0
ANDERSON & HYNES, Brighouse (accepted) . . . . .	39	18 0

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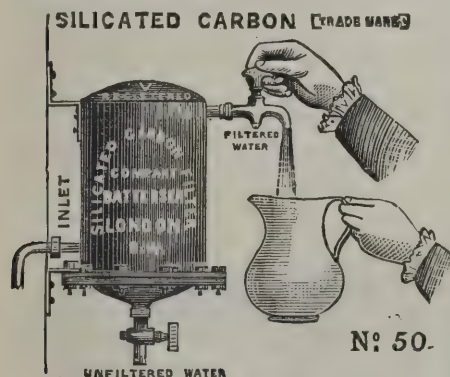
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SHEFFIELD.

For Construction of Buildings and Works for Treatment of Sewage at Blackburn Meadows, near Sheffield.		
Green, Rotherham . . . . .	£42,541	0 0
Smith, Rotherham . . . . .	32,242	0 0
Brumby, Sheffield . . . . .	32,196	0 0
Fidler, Eekington . . . . .	30,450	0 0
Ripley, Rotherham . . . . .	28,075	0 0
Warburton, Manchester . . . . .	27,331	0 0
Obank & Son, Idle . . . . .	27,800	0 0
Carr, Sheffield . . . . .	26,250	0 0
Armitage & Hodgson, Leeds . . . . .	25,758	0 0
Pearson & Sons, Bradford . . . . .	24,950	0 0
Brier, Sons & Wilson, Dewsbury . . . . .	24,700	0 0
Tomlinson & Sons, Sheffield . . . . .	24,600	0 0
Scott, Rotherham . . . . .	24,600	0 0
Longden & Son, Sheffield . . . . .	24,506	0 0
Bissett & Son, Sheffield * . . . .	23,860	0 0

\* Recommended for acceptance.

SOUTHEND.

For Erection of Mechanics' Institute, Southend. Mr. E. WRIGHT, Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.

Bullock . . . . .	£1,800	0 0
Drake . . . . .	1,407	0 0
Baker & Wiseman . . . . .	1,419	0 0
Steward . . . . .	1,368	0 0
Woodham . . . . .	1,360	0 0
Whur (error) . . . . .	1,280	0 0

Design, without Basement.

Darke & Son . . . . .	1,050	0 0
Baker & Wiseman . . . . .	984	0 0
WHUR (accepted) . . . . .	949	0 0
Woodham . . . . .	940	0 0
Steward . . . . .	931	0 0
Architect's estimate . . . . .	987	0 0

SOWERBY BRIDGE.

For Execution of Decorator's and Painter's Works at Providence Free Church, Sowerby Bridge. Mr. T. L. Patchett, Architect.

LUMB, Triangle (accepted).

TUNBRIDGE WELLS.

For Repairs and Decorations at Calverley Park, Tunbridge Wells, for Mr. W. R. Musroon. Messrs. BATTAM & Co., Surveyors.

COLWILL (accepted).  
No Competition.

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WELLINGBOROUGH.

For Building House at Wellingborough, for Mr. C. H. Archer. Mr. E. SHARMAN, Architect.		
Underwood, Wellingborough . . . . .	£763	0 0
Archer, Northampton . . . . .	740	0 0
Leek, Wellingborough . . . . .	738	8 0
Brown, Wellingborough . . . . .	717	0 0
Henson, Wellingborough . . . . .	700	0 0
Harrison & Hacksley, Wellingborough . . . . .	689	15 0

WEST ENFIELD.

For Villa at Uplands Park, West Enfield. Mr. J. HAMILTON, Architect.		
Wallace . . . . .	£1,500	0 0
Harris & Wardrop . . . . .	1,104	0 0
Harper . . . . .	1,088	0 0
Harvey . . . . .	1,084	0 0
SATER (accepted) . . . . .	985	0 0

WORCESTER PARK.

For Erection of a House at Worcester Park, Surrey, for Mr. C. W. Smith. Messrs. WHITFIELD & THOMAS, Architects, 20 Cockspur Street, Charing Cross, S.W. Quantities by Messrs. Evans & Deacon, 1 Adelaide Street, Charing Cross, W.C.

Heath . . . . .	£2,300	0 0
Goddard & Sons . . . . .	2,296	0 0
Hill Bros. . . . .	2,294	0 0
Bottrill (too late) . . . . .	2,250	0 0
Jarrett . . . . .	2,190	0 0
Killick . . . . .	2,155	10 0
Shillitoe . . . . .	2,150	0 0
TURTLE & APPLETON (accepted) . . . . .	2,050	0 0

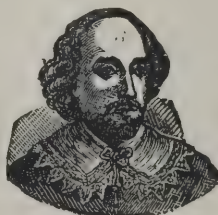
YEOVIL.

For Erection of Malt-house, for Mr. Joseph Brusta, Yeovil. Messrs. H. STOKES & Co., Engineers & Architects, 24A Southwark Street, S.E. Quantities by Mr. H. Stokes and Mr. F. E. Morris.

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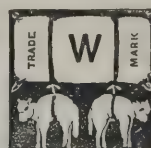
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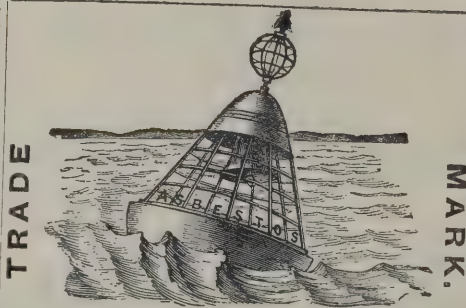
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# The Architect.

## CURIO-MANIA; OR, THE ROMANCE OF CURIOSITIES.



THE sale of the Fountaine collection at Messrs. CHRISTIE'S last week, although not by any means an exceptional manifestation of the enthusiasm which can be excited in an auction-room when curio-mania is in question, seems to have awakened throughout the country a little more amazement than usual at the large sums of good money which people of the highest character for culture can be persuaded to pay or to advise to be paid for articles which in the vernacular will be only called by some such name as toys.

We do not feel particularly called upon to rejoice over the big figures in question, nor, on the other hand, to exhibit any kind of distress at the contemplation of them; our object is to inquire what is the real effect of such romantic extravagance upon the great cause of national art, and whether there are any legitimate influences which bring about such phenomena. The mere sums of money do not tell the tale; they are but like the figures in an algebraical equation. For when one gentleman transfers to another the possession of a piece of interesting china in exchange for the possession of two or three thousand pounds sterling, which he transfers perhaps to another gentleman next week for a piece of interesting enamel in which he takes more delight for the moment, it seems difficult to see how any one of the three is a whit richer or poorer than the young people of the American story who "swopped" their articles of attire for a whole afternoon, and are represented so erroneously to have cleared a few dollars apiece.

If the article which is sold at so high a price—and it is useless to quote any more the hundreds and thousands of pounds to which the vases and dishes were "run up" the other day by the excited subjects of curiosity-mania and their shrewd agents—if the thing is undeniably a wonderful work of human genius in the direction of that supreme delightfulness which nature attains without an effort, and man must for ever therefore strive so hard to emulate in such small measure as he can, then it may at least encourage artistic endeavour in general when those who happen to be the possessors of large accumulations of property, and have to seek out channels for its bestowal to please the fancy, thus rival each other in the desire to be associated with success so exquisite, if only through the unsubstantial title of ownership—unsubstantial because the artist after all is the only solid owner of that which is his work. That one's own fingers may possibly in time be so blessed as to produce a princely thing of beauty, which shall be thus worshipped of mankind, is a thought, perhaps, of more genuine enjoyment than the anticipation of conquering a kingdom; and, indeed, is not a great artist a king of men? We may go further, and acknowledge that there are works of art whose possession by the nation, and at the highest of all prices—perhaps a price higher than any money value in the open market can ever represent—is the only honour that can be recognised as worthy of their merits. But how many of even the most highly-priced "objects of art" in the world can answer this description?

It is one of the most imperative duties of all artistic criticism in these days to keep continually before the public the fact that the "treasures" of the great collections of "art" are not identical with the masterpieces of artistic creation. Excellent workmanship of one order or another we may assume to be almost universal; it is not worth while to quarrel with the admiration of the artisan-hand when it is the artist-hand that is to be tested. But is it not often the case that, the more excellent the corporeal manipulation of the work may be, the more delusive will be such excellence, when that spiritual element of poetic device which constitutes its fine art is imperfectly, spuriously, or even—as it sometimes is—perniciously manifested?

We are not obliged any the more to deprecate the collection of highly-priced curiosities when we draw a distinction between them and the sovereign examples of artistic genius.

If it be only fairly understood that they are no more than they are, so be it; but the question is how far they can be expected to help to form a true national taste with reference to the art of the future. In other words, if the working leaders and guides of the art-workmen of England in these critical times are to be led to accept the mere curiosities of antique workmanship as "treasures of art," and to take the high prices they sell for in the auction-room to be a true test of their artistic merit, as an almost supernatural quality to be studied, analysed, admired, and imitated implicitly and unreservedly, then is it not our duty, in spite of "fabulous prices" declared from rostrums, impetuous congratulations of aristocratic companies, and delicate applause of kid-gloved ladies' hands, to warn the rising generation of manly English artist-workers that these may be treasures of authenticity but not of art?

It would be altogether a mistake, however, to let it be supposed that, while the curiosities stand so high in the market, the examples of true art are treated with less honour. The enormous prices paid by collectors nowadays are still but symbols in so many equations, and it is still the mere superfluity of general wealth that is the most important factor, but the same prodigious money figures certainly attach to pictures as much as to anything, and probably with a better appreciation and discrimination here of real intellectual value. It is unnecessary to add that, in the minor art world, and in the curiosity world itself, those articles of costly authenticity which are also of really exalted artistic merit, if they do not float any higher because of that consideration, certainly float equally high with the best. We may therefore contemplate the exaggeration of artistic prices at large as something which is brought about by influences worthy of being understood. But it is not that all artistic work sells well, or sells at all; many a struggling artist knows this to his great and abiding disappointment. It is not that even good artistic work is always a commercial success; there are only too many instances to the contrary. It is not that exaggerated values are meant to afford aid to the universal progress of the artistic spirit. Suppose the prices at CHRISTIE'S were to fall 50 per cent. all round, or even a good deal more. If such were actually to be the case, perhaps it would have to be accounted for by some great commercial disaster, affecting the whole country, and indeed extending probably over the whole of Europe; but let us suppose that it was due only to the preaching of some sudden RUSKIN-gospel of common sense, some reaction of the sense of duty, or some diametrical change of the romantic sentiment. May we be permitted to ask whether the consequence might not possibly be a speedy enhancement of the money value of many thousands of what are called mediocre because they are cheap, but are still admitted to be charming, productions of everyday artistic workmanship? The same wealth that now expends itself in the romance of long dead-and-gone authenticity might just as well, and surely to a better purpose, be diverted to the purchase of the living things of equally authentic genius that are born and bred in our own day and our own land. May we not say *a priori*, however true it is that the value of a thing is what it will bring, that a palpably extravagant and incoherent value in CHRISTIE'S auction-room is a palpably unwholesome value? And then the question is whether this unwholesomeness is a private or a public disease.

When an enamel vase of no great majesty fetches so many thousand pounds, let anyone who inspected the Fountaine collection last week reflect for a few moments upon how far the money would go in the Royal Academy Exhibition, or in the building of a mansion, a public gallery, a church, a monument, not one of which need cost a shilling the more because of its being designed with exceeding grace for everlasting homage; and then let him ask why all these should be disparaged and put out of countenance by this one little vase? Is it a work of that supernal intellect which makes man god-like? Or is it a thing of that infinitely dainty and delicate finesse of the wondrous human hand which is a material rival, so far as material rivalry can go, of the spiritual device that is still supreme? Or is it rather a specimen of rare authenticity only, which it is impossible to match, not owing to any deficiency of manual dexterity, but because of the technical question of historical counterfeit? Surely in these days of practical art it is a satire upon all this romance of authenticity when the collections of Europe are full of specimens well known as copies that cannot be distinguished from the originals, the copy worth nothing, the original priceless!



In forming a historical gallery, or rather museum of artistic works, great nations are well entitled to rival each other in procuring genuine examples at whatever price sane, not to say prudent, experts may find themselves obliged to pay for them; but it is not an act of Philistinism to observe that, even with this purpose in view, there is reason in the roasting of eggs, and wisdom, let us add, and true patriotism, in avoiding the profitless enrichment of the unscrupulous fraternity of commission agents and brokers, whose well-known ignorance of true art, if there were no other test, ought to warn off those who desire to be well advised.

Far be it from anyone to discourage the collection of works of genius; but we cannot but feel that we represent a strong feeling in this country, when we say that they ought to be really works of genius paramount, if their acquisition for universal study is to benefit the national taste in these busy and thoughtful days.

### LIFE IN ARCHITECTURE.

MOST people who are interested either in the art or the archæology of London have probably examined before now the recently uncovered side of Westminster Hall. There is nothing very remarkable about its proportions or its details, and such beauty as it may once have possessed has long ago been destroyed by excrescences and alterations. "Interesting chiefly to the historian and the antiquary" is the verdict which the modern architect, mainly intent on what will help him with his own work, will at first, perhaps, be inclined to pronounce on it. Still, it is worth a second glance, and if the eye wanders on to the modern building which adjoins it, it is pretty sure of a third one. For here, side by side, stand one of the roughest of ancient remains, and one of the most elaborate of modern productions, both alike Gothic; and yet one full of life and the other of lifelessness. In front there is an unadorned old wall, with little to relieve it except vast, unstudied-looking buttresses: further south there is the richest façade of the Houses of Parliament, with scarcely a plain stone about it; and yet, for one of the very highest qualities of art, it is the rugged building that bears away the palm, and the laboured one that cannot for a moment attempt to claim it. It is not Sir CHARLES BARRY'S design alone which shows to this disadvantage: this is the common contrast between old work and new.

Everybody with the capacity for appreciating art knows what is meant by "life" in painting and sculpture, in poetry and the drama. Every architect knows, or should know, what is meant by it in decoration, even of the less ambitious kinds. Some five-and-twenty years ago, as most of us remember, there was a strenuous attempt to supersede the so-called "conventional" ornament, found in most Mediæval work except that of the early part of the fourteenth century, by so-called "naturalistic" carving, in which the forms, chiefly vegetable, were directly copied from those of natural objects. The Oxford University Museum was one of the buildings to which this system was most thoroughly applied. Every column was finished with a representation of some particular plant, and the "fern capital," the "aloe capital," and the "violet capital" received great applause, for the moment, as new and admirable works of art. As most people now see, they were not works of art at all, but feeble transcripts of nature—imperfect even as transcripts, because they aimed at rendering, in coarse stone, effects that could hardly have been copied even in the most delicate metal-work. But it was not the imperfection of the rendering that made them intolerable so much as the lifelessness. In their anxiety to show every leaflet on the fern and every spine upon the aloe, the carvers missed the main facts about the way in which ferns and aloes grow. Their carvings, even if accurate, would only have been carvings of limp and flaccid leaves—of things which everyone would wish put out of sight if he actually saw them, and of which no one, therefore, could be expected greatly to enjoy a mere mechanical representation. Decoration of this type soon had its day, and people saw that it was better to have life without minute imitation of nature, as in the old "conventional" ornament, than minute imitation of nature without life, as in this would-be "naturalistic" decoration.

But it is not only in the imitative arts, like painting and sculpture, and the half-imitative ones, like ornament, that life is important. It is no less essential in the purely creative art

of architecture proper. The means, indeed, by which life shows itself here are more subtle, more recondite, more hardly to be traced than those by which it enters into the works of other artists; and hence it happens that the architect is of all men most in danger of missing the quality. It was not always so. From the eleventh century to the fifteenth in England, and much earlier and later elsewhere, life is the one quality which crowns every success, and redeems almost every failure. Multitudes of the minor works of the Middle Ages would be simply intolerable without it. Their proportions, not seldom, are uncouth, and their details comparatively unattractive. A modern copy of them, reduced to the flatness and tameness by which copies are usually distinguished, would hardly be borne with even by the least cultivated people; and yet the originals attract almost everybody. In this secret of putting life into a building evidently lies the solution of many difficulties; amongst others, of the difficulty of producing artistic work at a cheap rate. The late Mr. STREET long ago remarked that ancient buildings never failed artistically for want of money: the cheapest were as good in their way as the most expensive. They could not have been so good if dignity of outline were in question, for this means height, and height means cost. Nor could they have been as good if quality of ornament were meant, for the higher types of ornament would be unattainable because of the expense. But the humblest building may equal, or even excel, the most ambitious one in this quality of life—just as the smallest plants, according to VIOLLET LE DUC, express it more forcibly than shrubs and trees. It is worth asking, then, by what means life, in architecture proper, can best be manifested, and how we can attain this invaluable effect, which will atone for so many other deficiencies, but for the deficiency of which nothing can compensate us.

Life, then, seems mainly to show itself in architecture by three things—naturalness, unexpectedness, and strength. It is probably because it involves naturalness that it is so rare in modern work; for in an artificial state of society naturalness is just what is most uniformly repressed. It belongs, in fact, only to the lowest and the highest sections of such a society; it is the first thing lost by incipient learning, and perhaps the last one regained by consummate culture. In intermediate stages, few people dare to be natural. How many living architects are there, for instance, who would have ventured to build the naïve-looking, natural, and practical flying buttresses lately uncovered at the side of Westminster Hall? Which of us would not have tried to smooth them down, to tame them and moderate them, and bring them in some kind or other of conformity to habit and custom? The building throws them out, just as an animal throws out its limbs; not where it thinks they look best, but where it feels that they will support and steady it best. This same irrepressible naturalness, this daring to do just what is wanted without regard to appearances, shows itself in almost every building that is eminent for the expression of life. Look, for instance, at the staircase turrets in the west front of Coutances Cathedral—not cramped and crowded so as to form only slight projections, but boldly detached from a corner of each tower. Few architects had dared to do anything so free and natural before; none, perhaps, would venture on such a liberty now; and yet what an almost startling effect of vigour is the result. Look, again, at our old castles, such as Pembroke. There is no regularity about them, no purposed symmetry of plan or elevation. The walls bend about and step up and down just as the ground makes it desirable. The towers are placed not where beauty but where use decided. Everything is practical and utilitarian, and even because of this the whole grouping is so natural that it almost looks like a part of nature itself. Such examples as this make one ask whether half the ugliness of modern engineering works does not spring from the engineer's endeavour not to let them be ugly. If they were only natural they would be tolerable; it is the attempt—the misplaced and unsuccessful attempt—at symmetry and regularity which leaves them so hopelessly vulgar.

Unexpectedness—the next means by which life is exhibited—is perilous if not accompanied by reasonableness. In itself it implies an approach to the border-line which divides the sublime from the ridiculous; and yet the nearer it approaches to this line without crossing it, the more surely the effect of life is realised. Nothing can come much nearer to the critical point than the great figures of oxen, which look out of that most unexpected place, the top of the north-west tower at



Laon. They are a decided surprise ; and yet, when one comes to know that they are meant to commemorate the great service done towards the building of this church by the cattle which were employed to draw the materials from afar, one feels it to be a reasonable as well as a kindly impulse which led the old workmen thus to preserve the memory of their humble fellow-labourers. But even in the smallest details, where much repetition takes place, the skilful introduction of the unexpected is the only way to prevent weariness and satisfy. In the diaper patterns, for instance, with which the Eleanor Cross at Geddington is almost covered, nothing but uniform repetition at first shows itself. Every square, on a hasty examination, seems to be fitted with the same sort of flower, or the same number of leaves, arranged in the same way. If this really were so, to have seen one square would have been in effect to have seen all ; and nobody would interest himself in looking further. But, on quietly examining the work, we come here, as everywhere in genuine art, on little breaks in the pattern, and find in one place a different sort of leaf, and in another no leaf at all, but a field mouse or a lizard snugly coiled up where we expected a leaf to be. It is just such "surprises" as these which distinguished the productions of the artist from those of the machine, the living from the lifeless ; and many things, like irregularities in the spacing of an arcade or the width of a bay, which most people complacently set down as masons' blunders, are just those refinements of self-concealing art which give to old work its never-dying charm.

Strength is no less essential to the expression of life than naturalness and unexpectedness : but it needs to be remembered that strength is one thing and clumsiness another. Just as bulk, in an animal, may denote great muscular power, or may indicate only a large accumulation of fat, so it is in a building. It is not uniform massiveness that suggests strength, so much as special solidity where solidity is evidently wanted. Norman buildings, as a rule, were massive everywhere—in walls, in piers, in vaults : but they suggest heaviness rather than power, fat rather than muscle. And the fact that two of our cathedral towers have failed within the last five-and-twenty years, from the weakness of the immense Norman piers on which they rested, show that appearances in this case are not misleading. It is not the uniform overlaying of a building with twice or ten times as much material as it needs which will impress the beholder with its strength and permanence : it is rather the concentration of great solidity on critical points. The columns in a Greek building, the piers and buttresses in a Gothic one, are evidently the parts on which everything depends ; and it is these which are pre-eminently distinguished for power and rigidity. Above the columns and between the buttresses there is room for lightness and grace ; and if these qualities were absent, strength itself would not look half so strong as it does by contrast with them.

#### ROYAL ACADEMY LECTURES.\*

THE readers of *The Architect* do not need to be told that Mr. HODGSON, the Royal Academician, is able to write well, and that his essays have a grace of style which is not imparted to a writer in books on rhetoric, or in college classes. When it was announced that an artist who was gifted with such powers of expression and whose scholarship was undoubted had been appointed to the office of Librarian and Professor of Painting, there was a general agreement that the Academicians had for once, at least, selected the right man. We are still of that opinion, although the Professor in his first and second courses of lectures has hardly done justice to himself. It would be impossible for a man endowed with so many gifts to deliver a lecture which was unprofitable, and, in the volume before us, there is much which a student can utilise. But it must be said that the task undertaken in the delivery of the two courses was one which no man could execute with satisfaction to himself or to his audience. In his preface, Mr. HODGSON suggests the kind of lectures which he desired to give, and we are confident that if he had carried out his own plan students of art, nay, every reader of his book, must have been indebted to him. Mr. HODGSON as an Eastern traveller knows the distinction which the Turks make between verbs of opinion and verbs of knowledge. The latter are used whenever a man speaks with the certainty that is derived from his

own experience, the former when he speaks from hearsay. In anything that comes from Mr. HODGSON, we expect preponderance of words which are inspired by knowledge, and the preface confirms the expectation. "If I were five-and-twenty again," he writes, "knowing what I know now, I would build my life on other lines." That of course is impossible, but I can help others who are only five-and-twenty to do it. Experience, suffering, and mistakes have in my own case not been wanting, and some wisdom this book of mine must contain, if it is only that which resides in HORACE's dictum—*Amara lento temperet risu*. . . I have endeavoured to impart what things I have learnt, what maxims have come to me through experience, and I myself have been the whetstone which has sharpened my own satire." What could be more useful for a young painter than a book which was so inspired, especially when it was known that the author by his very nature must be sincere in his utterances ? Mr. HODGSON could have produced a book that would come home to the bosoms as well as to the business of artists. But as soon as he ascended the rostrum he appears to have abandoned his plan, and instead of speaking of what he had seen and felt, like a man who had history within himself, he discourses just as any official might whose world was a library, and who can placidly contemplate men as if they were intended to be puppets for the use of book-makers. Mr. HODGSON surveys mankind, not only from China to Peru, but throughout a wider region ; he regards the past as well as the present, and with easy confidence justifies the ways of heaven to earth. The history of art from the time of the Greeks to the nineteenth century is despatched in half a dozen lectures, and three lectures suffice for the Primitive or the Hieroglyphic Period, the Transition or Naturalistic Period, and the Renaissance or Poetical Period. With the utmost deference to the Professor, we say that those subjects are not adapted for an hour's lecture. TURNER was able to represent half a county in a vignette, but hitherto it has been found impossible to compress the history of any age into a few pages of manuscript. An aspiring haberdasher might take up the subjects as readily as he discusses the relation between geology and revelation, the origin of languages or the like, and amaze himself and the members of the village institute by his familiarity with the past. In an Academy address we expect more recognition of what is feasible. Men who observe limits in painting and sculpture should know that the writer's field of vision is not boundless, and that selection is as necessary in one case as in the other. It is easy enough to accumulate materials about the history of art. And it is plain that Mr. HODGSON was overpowered with them, and possessed far more than he could have opportunity to use in his lectures. We see this when we find that the fiction is introduced of the prospectus of an imaginary book on art by a German professor, of which the following is a sample :—"Migrations of the Teutonic nations : their Medo-Persian origin. Gloomy superstitions. Love of fighting and field sports : falconry. They are converted to Christianity. The Zend-Avesta not quite forgotten," &c. There is no reason why Mr. HODGSON should not discuss those subjects, or others equally remote, but whether they would form advantageous lectures for Academy students is another question, and they certainly appear to be out of place in a book where the author says, "My experience, my sufferings, my own mistakes may have enriched my mind ; I, too, may have a message to convey to suffering mankind, which may have its humble usefulness." That message will be gratefully received whenever it is delivered, but a substitute for it is not to be found in "Preliminary Considerations towards the Formation of a Scientific History of the Revival of Art in Europe."

It would be impossible in a newspaper review to follow out all the subjects for discussion which are to be found in Mr. HODGSON's historical sketches. About many of the topics introduced it is hopeless to expect unanimity, and we do not quarrel with him when we find that he adopts a different interpretation to our own. It is, however, more pleasant to consider the parts of his lectures in which Mr. HODGSON is not trammelled by historical research or theology, and where one can recognise the author's own thoughts. And, in the first place, it should be stated that the lectures show a more catholic spirit than is commonly found in the Academy. The first President who set the example of delivering formal discourses cared little for anything that was not in the grand style, or outside the Roman, Florentine, and Bolognese

\* *Academy Lectures.* By J. E. Hodgson, R.A. Trübner & Co.



schools. The Venetians, Flemings, and Dutchmen were considered by Sir JOSHUA as departing "from the great purposes of painting and catching at applause by inferior qualities." His example has been followed by successive Professors, and from time to time various schools have been held to be outside the pale of art. Mr. HODGSON is more generous. He says that whenever he pays a hurried visit to the Academy it is probable that he restricts his attention to the little "Garvagh Raphael" and one of the "Metzus." If it be said that a liking for pictures which differ so much denotes some want of balance, he defends himself by saying, "I know that I do admire them both; that, dissimilar as they are, they each give me intense pleasure; and our enjoyments in this world are not so numerous that we can afford to be always appraising them to see if they are really worth the market value; let us accept them, and be thankful." This spirit operates throughout the lectures, and whenever Mr. HODGSON introduces the name of an artist or a school, we are sure to hear of good qualities. Take, for example, the Venetian and Dutch schools, which, as we have seen, did not gain the approval of Sir JOSHUA REYNOLDS. Mr. HODGSON, when describing the Venetians, is not oblivious of form, but his value of the colour element is very different from Sir JOSHUA'S:—

The Venetian painters were nursed in the midst of gorgeous colour, and their art was inspired by it. In Titian's mind colour did for everything; it was religion, it was poetry, it was history, it was pathos and it was laughter, it was fact and it was fiction. He knew everything that it could do; he was as subtle as Raphael in another way. Take the colour out of a picture of Titian's, and it falls to pieces; the *Bacchus* and *Ariadne* is no longer Bacchanalian, *The Entombment* is tragic no more. He is the painter of painters who cannot be engraved. His vigour of mind was extraordinary: he was the shrewdest of painters, his judgment as applied to art was unerring, and he never missed his aim; what he undertook to do he realised. The Virgin translated to heaven in clouds of glory, the body of the Saviour carried through the twilight to the sepulchral grotto, the saintly monk beset by ruffians in the forest, the nymphs and fauns of Greek mythology—every scene he undertook to paint lives before you. He, moreover, invariably gives you the keynote of it, that which is most characteristic and essential in it, and he elevates everything into a high intellectual region. His work baffles analysis. I think it possible, by attentive study of Raphael, to divine the secret of his effect and to discern the means; it is impossible with Titian.

Mr. HODGSON expresses ideas which are about to prevail when he praises Dutch art. But he takes higher ground than the majority of critics, and argues that the art is "imaginative since it is full of beauty, and it is also emotional." The painters were able to express the beauty which a keen eye can discern in household utensils and in the huts where poor folks live, they made the best of their conditions, and for all we know to the contrary may have helped their neighbours to be satisfied with the simple life which they were compelled to endure. The artists did not paint for foreign critics who had derived their notions from southern schools, and to judge of their works properly we must imagine ourselves to be Dutchmen. The lesson to be derived from their works by an English artist is one of content—to accept the inevitable and to make the best of it:—

To us, who practise the art under somewhat similar restrictions, this ought to be a source of encouragement and consolation; however narrow the field, there will always be new ground to conquer. It is no good sighing after a state of things which has passed away for ever; what we have to do is to accept present conditions cheerfully, and then to see whether, even under these, some new and great result may not be achieved. We shall get no good to ourselves by sweeping generalisation or promiscuous classification, neither shall we learn anything from conventional criticism.

Fortunately for themselves the Dutch painters were able to find patrons who were satisfied with homely subjects, and who believed that it was an advantage to have more or less relation between the scenes that were transacted in a room and the scenes which were depicted on the walls. In no country has art been more popular than in Holland. The future of art in this country will also depend upon popularity; but what does that word mean in the nineteenth century? Pictures are so often bought with an eye to the auction-room it is difficult to ascertain what are the qualities which will give most pleasure and insure the success of the pictures which are yet to be painted by the young men who are now Academy students. Mr. HODGSON is of opinion that the grand style and great themes are not likely to be revived. Naturalism is hopeless

and unproductive, realism is beginning to be played out. The art of the future, according to Mr. HODGSON, is likely to have some affinity to the poetry of TENNYSON in literature, to the spirit which is seen in TITIAN'S *Entombment* and in TURNER'S *Old Temeraire*—an art which will suggest that in the painter's mind "external phenomena and events are merely reflected, glassed upon its surface, as accidental and fugitive things."

## THE OLD MASTERS AS REPRESENTED IN THE ART LOAN EXHIBITION, GUILDFORD.\*

IT will doubtless be remembered that on the postponement last year of the proposed Art Loan Exhibition I gave, by the kind permission of the then mayor, Mr. Alderman Triggs, and of Mr. Alderman Upperton, who is, I am happy to say, our worthy mayor on the present occasion, a lecture on exhibitions in the dining hall at Abbot's Hospital, in which I expressed my conviction that there were art treasures enough in this neighbourhood to form an exhibition of a most interesting and instructive kind, and knowledge enough in selecting and arranging them to make such an exhibition well worthy of patronage. That this prognostication has been amply fulfilled I think we have sufficient proof. We have not only an art loan exhibition but something more, namely, a very complete exposition of certain departments of archaeology and of natural history. These, however, with many others, are outside my province. Profiting by the reproof given to the cobbler of antiquity I confine myself to that domain of art with which, from long study and experience, I may claim some familiarity, namely, the works of the old masters, and I will, therefore, proceed to comment on some of the more important and valuable of these works; and to indicate, more especially, their influence on the development of art and of culture in England. I must, however, beg you to bear in mind, first, that the remarks I am about to make are not in the ordinary sense of the term critical remarks; and next, that because I am perforce compelled to leave many pictures unmentioned, it is not that I consider them devoid of interest or of merit. Now all who are in any way connected with art know the value of contrast, and if we would rightly understand the characteristics of painting in its revival from the thirteenth to the sixteenth century we must compare the methods then used with those employed by the ancients. The great technical distinction then between the two is this. The ancients practised painting in distemper, that is, in colours mixed with size and similar glutinous materials; and also in encaustic, that is in colours mixed with wax which were then fused together by the application of heat; but they were entirely ignorant, we are justified in believing, of the effects produced in painting by mixing the colours with oil. On the fall of the Roman Empire, when ancient civilisation was swept, as by a deluge, from the surface of Europe, painting with her sister arts perished. In Constantinople or Byzantium alone, the capital of the eastern division of the Roman empire, the tradition and practice of art, corrupt indeed but still technically valuable, survived, and by the Greek artists of that city who wandered abroad in search of employment it gradually spread over Southern Europe. The works thus produced were quaint in the extreme, mere repetitions of what may be termed a conventional or symbolic pattern; sometimes expressive of devotional feeling, but without beauty either of composition, or form, or light and shade, or colour. Nevertheless from this germ was developed a perfect vehicle for the expression of supreme beauty by the consummate genius of a Raphael. Convention, then, when once it emerged from the enervating influence of the lower Greek empire and became interpenetrated by the warmth of the fervid genius of the south, burst the bands that cramped its growth and developed like a mighty tree spreading abroad its branches, grateful in shade, beautiful in blossom, rich in fruit—a joy for ever. The productions of the earliest Italian artists, however, differed but very little from those of their Byzantine instructors. They were produced in distemper, and the surface was afterwards protected by an oil varnish. Of these works the exhibition is fortunate enough to possess two, namely, a triptych representing a *Madonna and Child*, with two saints (No. 1 in the catalogue), and No. 3, described as *The Marriage of St. Catherine*. These pictures, though somewhat obscured—for it is the nature of oil varnishes to become darker by age—are, as illustrating the earliest phase of painting, among the most interesting in the exhibition. A decided step in advance is shown in No. 9, representing *The Crucifixion, Via Crucis, and Deposition*, attributed to an artist of eminence in the fourteenth century termed Giotto, so called from his skilful imitation of the style of the most famous Italian artist and architect of the preceding century, Giotto, whose bell-tower, or campanile as it is termed, inlaid with precious marbles, and standing close to the cathedral of Florence, is one of the most beautiful structures in Italy. In this picture the artist, not content with mere fixed attitudes, gives us movement, depicts the progress of events, and, in a word, enters

\* A lecture delivered in the Town Hall, Guildford, by Mr. Thomas Whitburn, June 19, 1884.



the domain of history. A work of similar character, but still more advanced, is No. 6, termed *Atalanta's Race*, by Sandro Botticelli, also of Florence, who flourished about a century later, being born in 1437. He was originally a goldsmith, but love of painting caused him to change his profession; and his works, highly appreciated in his lifetime, but then neglected, have once more come into repute. The most important, however, and certainly the most beautiful of these early Italian pictures is No. 10, a *Holy Family*, by Ridolfi Ghirlandajo. Here, in the softness, clearness, and, as it is termed, luminousness of the colouring, we see one of the important improvements effected by the introduction of oil-painting in Italy. For the use of oil as a vehicle for the whole of a picture was not an Italian, but a Flemish invention. Up to the year 1410 pictures, as I have already stated, were painted in distemper, and finally coated with an oil varnish; but in that year, as nearly as can be ascertained, a painter of Flanders, named Hubert van Eyck, used thin linseed-oil such as this [oil exhibited] instead of size, to mix his colours with, and then added to each colour before using it a drop of varnish composed of amber dissolved in oil by means of heat. The colours thus dried with a lustre, they were less liable to injury from damp, and the final varnish was dispensed with. The amber varnish which I here show you is, there is every reason to believe, from researches made into the subject, identical with that which Van Eyck employed. The process of oil-painting was perfected by John van Eyck, a younger brother of Hubert, of whom there are several very fine and admirably preserved specimens in the National Gallery. Concerning this invention of oil-painting much controversy has arisen. It has been asserted vehemently, and especially by some Italian writers jealous for the honour of their country, that oil was used as a vehicle before Van Eyck's time, and there can be no doubt of the fact. But it was used merely for portions, accessories, and ornaments of a picture, and it was used in a thickened state such as I here show you; so that it would have been impossible to execute with it delicate and subtle imitative effects such as Van Eyck and others after his time produced. This picture, then, by Ridolfi Ghirlandajo is an admirable example of the Flemish method as practised by the Italian painters. It differs in some respects technically from methods afterwards employed, but it has merits peculiarly its own, and deserves admiration and attentive study. Another example also of the same period and style is No. 2, *The Annunciation*, by Lorenzo di Credi, a fellow-student with Leonardo da Vinci, and one of the first to adopt the method of oil-painting when introduced into Italy. An interesting example of the early Flemish manner is seen in the picture by the elder Breughel, No. 93. What art gained after this period was greater freedom, precision, and power. Up to the time of Titian, Correggio, and Raphael, it had been beautiful indeed, but fearful, as it were, of transgressing rules and proprieties; but in the hands of these great masters it developed its latent powers and took its place in the world dowered with the splendour of colour, the mystery of shade, and the majesty of expression. Of the Venetian school, of which Titian was the acknowledged head, we have two interesting examples in No. 25, a *Holy Family* by Andrea Schiavone; and No. 23, a *Holy Family* attributed to Bonifazio. By Correggio we find a characteristic sketch, No. 16, showing how great was the effect of softness and relief which this painter could produce with the minimum of labour; and also a head, *Ecce Homo*, No. 20, which, though small in size, is worked up to the highest degree of finish. Of Raphael we can show no original example, but an interesting copy of his famous *Madonna della Seggiola* in the gallery of the Pitti Palace, Florence, is seen in No. 111. Later masters are exemplified in works by Domenichino, No. 15 representing a head of *Junio*, and No. 30, termed *Elijah in the Desert*. Also by Sasso Ferrato, No. 19, depicting a *Virgin and Child*; and by Claude, No. 24, which is a small and early but beautiful specimen of this great landscape painter. But leaving, perforce, the Italian masters, let us turn to what in one sense more immediately concerns us, namely, art in England. In this department we shall find the collection peculiarly rich. True, we have none of the earliest examples of portrait painting in this country, for portrait painting, or the delineation of individuals, seems always to have taken a prominent place amongst us; but we are able at least to start with Holbein, of whom, in the portrait of *Edward VI.*, No. 91, we have a characteristic and excellent example. Born at Augsburg in 1498, Holbein was contemporary with the most famous artists of Italy, and as his father and uncle were artists of repute, there can be little doubt that the pencil was amongst his earliest playthings. Of his proficiency at the age of fourteen we have conclusive proof in the fact that he took at that age portraits of his father and his uncle, which are engraved in a splendid work termed "*Academia Artis Pictoriæ*," containing the lives of the painters, and published in 1675 by an artist and writer on art named Sandrart; and the massive volume (there are two of them) containing these portraits I here show you. That his reputation as a portrait-painter speedily became established is certain, and this was furthered by the warm recommendations of Erasmus, whose friendship he obtained, and whose portrait he painted about the year 1519. At this time the Earl of Arundel, passing through Basle, where Holbein then resided, strongly recommended him to visit England, but he put off this journey till

the year 1526, and before going he determined to leave behind him as a kind of jest a specimen of his imitative skill. Having just finished one of those works with which, from the Royal Academy Catalogue, we are so familiar, namely, the portrait of a gentleman, he painted on the forehead the portrait of a fly. Attempting to brush it off, the owner discovered the deceit, and the painter's fame spread, as is usual from tricks of this kind, far and wide. Arriving in England, he at first resided with Sir Thomas More, and then, given employment by Henry, he depicted that monarch and his court in the portraits which are so familiar to us. But I must mention, what we are very apt nowadays to forget, that Holbein was by no means a portrait-painter merely. With us art has become so sub-divided that it is rare to find a man who excels in more than one branch of it; but in the time of Holbein an artist meant a man who could build a palace, and decorate its walls, and design its furniture, and lay out its gardens, and contrive its fountains, and make statues and portraits of its possessors; nay, could even give patterns for the hilts of their daggers, and the jewellery which adorned their persons. Now, all these things, and perhaps more, Holbein could do, and probably did. Most, if not all, of his work of an architectural, sculptural, decorative kind has perished; but in his portraiture he still lives and to him we are indebted for the most faithful delineations possible of the great actors at one of the most momentous periods of our history. As an illustration of the versatility of the great artists of that period, I here show an autotype of a work of an exceedingly rare and beautiful kind, namely, a head modelled in wax attributed to Raphael, and preserved in the Museum at Lille. Raphael, it is well known, occasionally exercised his genius in architecture, and that he sometimes attempted sculpture a statue of the prophet Jonah by him testifies.

The reign of the sixth Edward was too short to be of any import to the arts; but in the reign of Mary, and especially in the much longer one of Elizabeth, we find that several painters of renown visited this country and left works behind them which are still highly prized, and of which excellent examples may be found in the present collection. Thus of Antony Moro, commonly called in this country Sir Antonio More, who died in 1581, we have a very fine specimen in the portrait of Sir Thomas Gresham, No. 87. With the individuality characteristic of Holbein, this picture combines a power of modelling and an effect of light and shade learned from study of the best masters of Italy. Cornelius Ketel, again, court painter to Queen Elizabeth, produced some very good work, as seen in No. 80, representing William Gresham; whilst by Zuccheri, also a favourite painter of the period, we have among other portraits, the famous one, No. 107, of the Queen represented as not only splendidly attired, but what she valued possibly quite as much—youthful and beautiful. The high finish of this picture in all its details is well worthy examination. Another very interesting portrait of the Queen, but at a different age, and in a less happy state of mind, is No. 96. The face is well painted, but it is difficult to name the artist with certainty. It bears the initials C. K. A popular painter in the succeeding reign, at least at court, was Paul Vansomer, by whom we find in No. 97 an ably-executed and characteristic head of Sir Nicholas Kempe, a friend of Archbishop Abbot, and a benefactor to the hospital of this town. Vansomer came to England in 1606, and remained here till 1620, during which time he painted the King and the principal nobility. He appeared to great advantage at the Art Treasures Exhibition, Manchester, 1857, where many fine works were shown by his hand.

As a patron of art and artists, however, James was far surpassed by his son, the unfortunate Charles, who—his political mistakes apart—was a prince of rare accomplishments. In the commencement of his reign Rubens who—strange union!—combined painting and diplomacy, visited this country as envoy from Spain, in order to negotiate a peace with that country. In this he succeeded, and he also left a fine example of his decorative skill in the ceiling of the Banqueting House at Whitehall, now transformed into a church. Of portraiture in this country we do not find that he left many specimens, in fact he only painted portraits on exceptional occasions, preferring historical or sacred subjects, but in the portrait of a burgomaster, No. 70, we have a very vigorous and skilful impersonation by his hand of a substantial Flemish merchant. It is to the most famous of his scholars, however, Vandyck, that England owes great part of her wealth in portraiture. Born in 1598, just a century after Holbein, and similarly gifted with precocious genius, he entered as a youth the studio of Rubens, and soon displayed such marked proficiency in portraiture that he was advised by that great painter to devote himself wholly to a branch of art in which he seemed certain to excel. Taking this advice, he set out at the age of twenty-three for Italy, and went first to Genoa, and afterwards to Rome, where he met with the celebrated Cardinal Bentivoglio. This prelate, distinguished both as a diplomatist and historian, would doubtless have preferred to have had his portrait painted by one of the great artists of his own country, but unfortunately the most eminent of them were dead. Titian, the greatest in portraiture, had died in 1576, three years before the cardinal was born, so he wisely made the best of circumstances, and having a liking for the artists of Flanders, to which country he had been sent as



legate, he welcomed the opportunity of immortalising himself through the pencil of Vandyck, and the result was a picture which spread the fame of the artist throughout Europe as the first portrait painter of his time, and which is now one of the principal ornaments in the magnificent collection in the Ducal Palace, Florence. During my residence in that city I had frequent opportunities of seeing this picture, and I there purchased an engraving of it which I now show you. So highly was this picture esteemed that the French, when they overran Italy, transferred it with other pictorial treasures to the Louvre, but at the peace it was restored. To obtain the original is of course impossible, but we are fortunate in being able to show No. 21, an excellent full-sized copy of it, and a valuable illustration of what may be termed Vandyck's Italian manner. To this period of his career also belongs the excellent portrait of a Genoese lady, No. 61. The number of portraits Vandyck painted during his residence in England (he died at the early age of forty-three) is prodigious. Necessarily he had many able assistants, the most skilful of them being Dobson—termed the Vandyck of England—by whom we have a fine full-length portrait, No. 84, of Richard, Earl of Portland, Lord Treasurer and Knight of the Garter. Dobson, whose genius was discovered by Vandyck by the accident of seeing a picture of his in a shop window, succeeded that great artist and became sergeant-painter to the Court, but he died not long after at the age of thirty-six.

And now it may not be amiss to say a few words on the vexed question of pictorial authenticity. If I were to read you a list of the artists who visited or resided in England from the reign of Henry the Eighth to that of the first of the Georges, you would be surprised at the number, but nevertheless *bored*, and the greater proportion of these, it must be borne in mind, were skilful painters, and either assistants or imitators of the artist most in vogue. It can be readily understood, then, that as Aaron's rod transformed swallowed up the other transformed rods, so the greater reputation of the ablest painter of any epoch absorbed minor reputations, and the consequence is that the works of a school, as it is termed, that is to say of the scholars or imitators of any particular master, are commonly assumed to be his. It must not be by any means supposed that these paintings are wanting in merit. They are, on the contrary, often but little inferior to those of the artist copied, for, being thoroughly grounded in what may be termed the grammar of art, all artists formerly possessed considerable technical skill, however deficient they might be in grace or power of composition or expression. Still, degrees of merit, slight though they may appear, are really very important, and authenticity in art will always retain its value.

After Vandyck, the painter who enjoyed the longest reign of popularity in England was Sir Peter Lely. Arriving here shortly after Vandyck's death, he was speedily introduced to King Charles, who was always ready to encourage talent, and he first painted the King's portrait, and then, it is said, that of Cromwell. On the Restoration he became high in favour with the second Charles, who conferred on him the honour of knighthood, and the beauties of whose Court he painted in costumes which can scarcely be called of that period, or indeed of any period. The two portraits above us are stated in Russell's "History of Guildford" to be by his hand; and the exhibition possesses one specimen, namely No. 112, a portrait of Rachel, Lady William Russell. Of Kneller, also a foreign artist, who was made a baronet by George I., and who came to England in 1674, and resided here nearly fifty years, the exhibition is fortunate enough to possess a very fine example in the portrait of the celebrated John Evelyn, author of "Sylva," No. 71, and also a very interesting one in No. 72, of Sarah, Duchess of Marlborough. Kneller, whose principal object seemed to be to amass money, in which he achieved considerable success, produced a vast number of works varying greatly in merit. When he chose to take pains his work was in certain technical qualities excellent, and it is often valuable as representing the celebrities of the day, but it seems cut out too much after a mechanical pattern; one portrait is, as regards attitude and arrangement of colour, very much a repetition of the rest; we weary of the monotony, and it remained for Reynolds, Gainsborough, and their contemporaries to once more invest portraiture with pictorial interest, and to raise it again to the height from which it had declined. One portrait painter, however, of the intermediate period, Jonathan Richardson, merits commendation; his portrait, No. 108, of the Right Hon. Arthur Onslow, Speaker of the House of Commons, being both well painted and well preserved; and by a great painter whose fame has become a national possession, and who must be considered antecedent to Reynolds, we have two valuable examples of portraiture in this collection. The first, No. 45, painted in conjunction with Sir James Thornhill, represents certain prominent members of the House of Commons; and the other, No. 60, gives a life-like delineation of the celebrated Horace Walpole.

I will now say a few words on the important subject of picture preservation—a subject on which a great deal of misapprehension has at various times prevailed, but which I nevertheless hope to make to some extent intelligible to you. I have stated that on the revival of painting in Italy in the thirteenth century the method termed distemper painting, that is to say, colours mixed with size and similar glutinous substances, and not with oils, prevailed, but that the picture thus produced was, when finished, protected from

damp by an oil varnish applied to the surface, and which was made usually of a gum termed sandarac, dissolved in linseed oil by means of heat. This varnish preserved the picture, it is true, but it had the great defect of becoming darkened by age, and the invention of oil painting consisted at first in the mixing the colours with oil, and adding to them, at the same time, a small portion of oil varnish to give them brilliancy; or if oil alone was used with the colours, and they dried dull, a coating of spirit varnish—that is, of gum or resin dissolved in spirits of wine, naphtha, or turpentine—was applied for the same purpose. These spirit varnishes are transparent, and some of them are colourless, and they have the advantage of being removable from the picture, if necessary, with much less danger of injury than an oil varnish. I here show you a bulky volume of somewhat heavy reading (it weighs seven pounds and a half), which was published by authority over thirty years ago, and which contains the opinions of all whose evidence was then thought valuable and could be procured, on the proper treatment of pictures by the old masters. That these experts differ widely enough on some points may be imagined; but on one at least the majority of them agree, namely, that oil or oil varnish ought not to be employed on the surface of an old picture. I lay the more stress on this from having seen many instances where serious and even irreparable injury has resulted from the improper use of such materials. This volume, then, is one of the many which have to be mastered by those who desire to become experts or connoisseurs; for knowledge of this kind comes not by birth, nor by inspiration, but by long experience and labour. It is a curious and remarkable fact that many of the earliest oil-paintings produced four and a half centuries ago are fresher and sounder than many that have been painted within the last century; and this is owing not only to the method of the old masters being a simple and right one, but also to the fact that they spared no pains to procure materials of the best quality, and then to purify them to the utmost possible degree. For these processes a vast number of receipts are given in the early treatises on art, of which these volumes contain a few, and I here show you some samples of linseed oil refined in some of the modes here prescribed. It is, you will perceive, as bright and clear as chrysolite. Moreover, prior to being refined, it had been kept for thirty years, for age improves oil for painting by allowing the mucilage or coarser filaments to settle at the bottom. Here is some mastic varnish of the same age, in which you will observe the same process of depositing a sediment, the varnish itself remaining now perfectly bright and clear, and you can understand that if this sediment remained in the oil and the varnish, and were mixed with the colours of, or deposited on the surface of a picture, considerable deterioration or obscuration of it might after a time result. But to pursue this subject further might be tedious, and as this art exhibition professes to be, and indeed is, essentially a local one, I think I may venture to say a few words in conclusion on the productions of an artist, who, although not literally an old master, has, nevertheless, been dead long enough to enable his works to be judged dispassionately, I allude to our distinguished townsman, John Russell, R.A.

Although occupying a prominent place in the world of art, and enjoying an ample share of Court patronage during his lifetime, he has for many years, to the general public at least, been almost unknown. In the catalogue of the famous Art Treasures Exhibition, Manchester, in 1857, when the object seemed to be to display the progress of portraiture in England in as complete a form as possible, his name does not once occur; nor is it to be found in the catalogue of the Great Exhibition at London in 1862, when English art from the commencement of the last century was again largely represented in all its varieties; and this is the more remarkable, inasmuch as many of those whose portraits he took were men of note. It seemed, then, to the Selection Committee that this opportunity should not be allowed to pass of displaying as large a number of his works as possible. Their requests for the loan of them have been most liberally responded to, and the result is a collection showing such versatility and power as to strike the cultivated beholder with astonishment and admiration. That he was the ablest crayon portrait painter that England has produced is, I think, generally admitted, but that he possessed powers in oil which place him side by side with Gainsborough and Reynolds was little suspected; nevertheless few, I think, will be disposed to dispute his title to that position who see his grand full-length portrait picture of *Admiral Onslow Receiving the Dutch Flag after the Victory of 1797*, which is one of the most skilful and effective works in the exhibition. Again the delicacy of his miniatures and smaller crayon sketches is admirable, and would alone suffice to gain for any artist a great reputation. There is an old and somewhat trite proverb that a prophet has no honour in his own country and amongst his own people, but this, I think, for once is satisfactorily disproved. We have not left to any other place the task of teaching us the duty of recognising and appreciating the works of a man of genius born among us, but we have seized, and most effectively used, the first opportunity for this that has presented itself, and there can be no doubt that the great feature of the exhibition—the one that will give it rank and character among the art exhibitions of the country—is this admirable collection of the works of Russell.



## DUNFERMLINE ABBEY.

THE west window of Dunfermline Abbey has been filled in with stained glass, at the cost of Mr. Andrew Carnegie, the founder of the Free Library and the Carnegie Baths. About two years ago, when Mr. Carnegie visited the abbey, and was looking at the stained-glass windows in the church, he stated to Mr. George Robertson, custodian of the abbey, that he had always had a desire to see the large west window filled in with stained glass with historical figures. He offered to be at the expense if the Commissioners of Works would allow him. This consent was given, under the condition that the design met the approval of the board. Mr. Carnegie asked Sir Noel Paton to make a design in accordance with his (Mr. Carnegie's) ideas. Sir Noel having undertaken the task, a sketched design was submitted to the Board of Works, and approved of by them. Mr. Ballantine was afterwards chosen by Mr. Carnegie and Sir Noel Paton to execute the glass. The work since that time has been proceeded with, no effort being spared by them to render the result satisfactory to all concerned, both in an historical and artistic sense. Mr. Carnegie has seen the work from time to time, and has not only expressed his satisfaction but has contributed many valuable suggestions in respect to the intended effect. The filling-in of the window has caused much alteration in the church in the way of removing the balcony which crossed and so much disfigured the window, and also in restoring the structural lines of the window to its original state. A new access to the steeple had also to be formed; and though this is not yet begun it will shortly be so, and when finished will afford a safe and commodious mode of ascending the belfry, which has been much repaired. The whole cost of the works is to be borne by Mr. Carnegie. There are four prominent ideas in the four lights of the window—these are Unity, Piety, Liberty, and Victory. The left centre-light represents Malcolm III., King of Scotland; under him Scotland was united. That unity cost murder, suffering, and death. Malcolm's father, Duncan, was murdered by Macbeth; his grandfather, Malcolm II., was assassinated; and his great-grandfather, Kenneth, was murdered, and at last Malcolm Canmore and his eldest son were killed at the siege of Alnwick. The right centre-light represents Queen Margaret. The fingers of St. Margaret are fixed on the Bible, showing personal piety. The marriage of Margaret with Malcolm III. was the most auspicious event in the history of this country. She was born in Hungary, but she was English in all her associations till she was married. She brought with her a better civilisation than the nation was possessed of. Sir William Wallace represents Liberty, and Robert the Bruce, Victory.

At the unveiling of the window the following letter from Mr. Carnegie was read:—

"MY DEAR MR. ROBERTSON,—As I am not to be present at the unveiling of the window, I beg you, on my behalf, to hand it over formally to the proper authorities.

"I believe the people of Dunfermline will find in this window a work of art not unworthy of the dear old abbey, nor of the great artist, their distinguished son, whose heart has been in the task throughout. I rejoice to say that in the selection of the characters to be commemorated Sir Noel and myself were equally enthusiastic. Our patron Saint Margaret taught others to read, and the book she holds tells the secret of Scotland's glory. She has educated her children for centuries, and these in turn have placed to her credit a greater amount of solid achievement than any other aggregation of four millions of people will pretend to claim. You have The Bruce, after repelling foreign aggression, sheathing his sword; and Wallace protecting lovely Scotland, who, cowering at his feet, craves his aid. In this man, neither king nor noble, but one who lived and died one of ourselves, a man of the people—a man whose fame grows greater and greater as his deeds are studied, and the history of his time is unfolded; a character which realises our loftiest ideal of patriotism—it is in him, I trust, as I did in my youth, the young men of my native town will find their true hero. I am gratified beyond measure that I have been able to add an attraction to the old abbey of my love.—Very truly, your friend,

"ANDREW CARNEGIE."

Sir Noel Paton, in regretting his inability from illness to be present, says, in a letter to Mr. Robertson:—

"I am glad it has been resolved upon to inaugurate the window with some amount of ceremony; for, whatever may be its shortcomings as a work of art, it is a munificent gift to Dunfermline, and it is meet that it should be received with all due honour by the fellow citizens of the big-hearted donor, to whose princely liberality they are so deeply indebted."

It is said that Sir Noel Paton received 2,000*l.* for the design, and Messrs. Ballantine 350*l.* for the glass work. To this falls to be added extensive alterations on the building, which will raise the cost to about 3,000*l.* Mr. Carnegie's total gifts to Dunfermline during the past ten years amount to 17,000*l.*

The *Conversazione* of the Royal Academy was held on Wednesday evening.

## ARTISANS' DWELLINGS IN BIRMINGHAM.

ON Tuesday last the Mayor of Birmingham asked the Town Council to approve of the report of the Artisans' Dwellings Inquiry Committee, and that the same be referred to the Public Works and Health Committees with instructions to carry out, as far as possible, such recommendations contained therein as related to their respective departments. The Mayor said that in regard to the report on the number of void houses there was cause for congratulation. There was a percentage of 14.57 of void houses where rents did not exceed 2*s.* 6*d.* per week; 8.60 percentage of void houses with rents between 2*s.* 6*d.* and 3*s.* 6*d.* per week; and a percentage of 6.78 of void houses with rents between 3*s.* 6*d.* and 7*s.* per week. It was satisfactory to find that the largest number of voids was in the poorest class of houses. It indicated that where the working classes could pay for higher-rented houses they were willing to do so, and it showed to those proposing to build houses that there was really a field open for them in building a class of houses which were in most demand by the artisans of the town. He hoped that the Council would not understand from the report that the houses in the borough were, from a sanitary point of view, all that could be desired, for many of the lower-rented houses were erected without any regard to building regulations. Thanks to the work of the committee, the houses in many cases had been cleansed and repaired, and the formation of the committee had led to an immense amount of good work being carried out in this and other directions. The committee thought that many of the houses rented from 2*s.* 6*d.* to 3*s.* 6*d.* a week might be condemned; but what would have been the consequence? In his opinion it would have driven many of the people perhaps into the workhouse, for, earning but one pound a week, they could not pay higher rents; or it would certainly have sent them into lodging-houses, and subjected them to the many consequent evils, so that the remedy in such cases would be worse than the disease itself. Many of the landlords of these small properties were in as poor a condition as the tenants, and it would be exceedingly harsh to close such houses without giving some compensation. To his knowledge landlords had expended as much as they could afford in repairing these properties, and the difficulty would be to remove them. He trusted that as the leases of some of the wretched little places expired, the owners would see their way clear to dispose of the land at reasonable rates to those who desired to erect suitable artisans' dwellings. The first recommendation of the committee—"that all new houses should be certified by some competent official before the same are allowed to be inhabited"—would, he thought, if carried out, have more effect than the visits of the inspectors during building operations. The second recommendation, urging that extreme care should be taken by the building surveyor in the supervision of materials used, was particularly necessary, because it was found that many houses were built of the most wretched bricks and mortar, not worthy of the name by which they were called. It was most desirable that the staircases of new houses should be better constructed, and the coroner was perfectly justified in continually drawing attention to the question, and the committee in their report had recommended such better construction. The other recommendations in the report, as to employing scavengers and whitewashers to cleanse the worst courts occasionally, the lighting of courts, better closet accommodation for children, cheap trains and tramcars, and the erection of model dwellings by private enterprise, were of an important character. With regard to the lighting of the courts, the Gas Committee would undertake to place a lamp in a court, at a charge of 34*s.* per annum for gas, or with an additional 6*s.* per annum for the lamp to remain the property of the landlord of the court in which it is placed. As to the erection of model buildings, he thought that, while it was not the duty of any local authority to provide houses for the people, it was the duty of that authority to give every facility and encouragement for the provision of such houses. It was true there were several building societies in the town, and most of them seemed to have money in hand with no employment for it. There was a field now open for them to invest this capital if they were content with a moderate return for their money. The committee were assured on all hands by the working classes that they were willing to pay for a good house as much as 5*s.* or 6*s.* a week, and good houses certainly ought to be provided at such a rental. In conclusion, he expressed the hope that one of the results of the inquiry by the committee would be that further attention would be drawn to the subject, and that some body of gentlemen would make the experiment of providing suitable houses for the artisans of the town.

The report was adopted, subject to some amendments, one of which was:—"That the Improvement Committee be instructed to consider how the principle of rent collection, as devised and carried out by Miss Octavia Hill in London, can be applied to the area under their control, and to report to this Council thereon."

The Lord Mayor will distribute the medals to the successful British exhibitors of the late Amsterdam Exhibition, at the Mansion House, on the 30th inst.



## NOTES AND COMMENTS.

THE proceedings at the sale of the Leigh Court Collection to-day (Saturday) will be watched with much interest. It is fitting that works by old masters should be found in public galleries, but they are not always equally suitable for private houses. Are amateurs to compete for the canvases with as much determination as was displayed at the sales of the HAMILTON and FOUNTAINE collections? If they do, there is no doubt that the price of a great many works which have long been lying in the dealers' hands will be immediately raised. Several of the pictures should be secured for provincial galleries, and some very useful examples are not likely to reach extravagant figures. There are, for instance, five works by the CARACCI, and if Sir JOSHUA REYNOLDS is to be taken as an authority, no artists are better deserving of a student's attention. The *Creator Mundi* ascribed to DA VINCI may not be an original, but it is at least a good example of Milanese work. The *Venus and Adonis*, by TITIAN, has more evidence in its favour, and is sure to realise a large sum. NICHOLAS POUSSIN's *Plague of Athens* is another useful work, on account of the severity of the style, although it must be said that no modern artist could well adapt it as a model. The three English works in the collection—viz., STOTHARD's *Canterbury Pilgrims*, HOGARTH's *Polly Peacham* and *Shrimp Girl*—should certainly be bought for one of the national galleries.

AN Association of Science and Art Teachers has been formed, and a conference of the members was held last week at Liverpool. The first resolution that was passed was in opposition to the present system of departmental scholarships. Successful students have now to pass their terms in South Kensington or Dublin, and it is said with reason that the prize-winners would be more satisfied if they could live nearer their homes; and, besides, a resident scholar would often be a benefit to a local science or art school. The association has been formed to promote education in science and art and the general advancement of the teachers. The following branches have been already established:—Manchester, 54 members; Liverpool, 55; Birmingham, 55; Newcastle-on-Tyne, 23; Leeds, 16; Sheffield, 14; Burslem and Northampton, 7.

A FEW months only have elapsed since Mr. WHITELEY'S premises were destroyed by fire, and already arrangements have been made for rebuilding them. Designs have been prepared, the quantities have been taken out, and the tenders have been submitted. No less energy will be shown in the works. One contractor has offered to rebuild the premises in the short space of four months, and the longest time required was only ten months. The tenders for the works vary from 59,710*l.* to 69,643*l.*

THE Charing Cross Bridge has been often pointed out as an example of what can be done towards spoiling an excellent position. Bad as it is, it will shortly be more of an eyesore, for the directors have obtained powers to widen the bridge on one side. The Victoria Embankment was planned so as to diminish as much as possible the defects of the bridge, recesses for steamboats having been formed on both sides and at equal distances from it. The Metropolitan Board of Works have been unable to prevail on Parliament to do more than introduce a clause in the Act, by which it is provided that the Board may at any time during the construction, or after the completion of the widening of the bridge, alter and reconstruct the face of the embankment under and on either side of the bridge, and rearrange the structure of the embankment so far as may be proper to maintain its symmetry and architectural character, all reasonable cost to be repaid by the company to the Board. In case of any difference between the company and the Board as to the desirability of such alteration or as to the cost of it, the point is to be determined by an architect appointed by the president for the time being of the Institute of British Architects, at the request of either party.

WE have already given an abstract of the recommendations of the City Companies' Commission, although the report was not published until this week. The annual income of the London companies is estimated as between 750,000*l.* and 800,000*l.* The capital value of the property owned by the

companies has not been estimated by experts, but it cannot be less than fifteen millions sterling, and in twenty-five years may amount to twenty millions. The rateable value of the halls of the principal companies is about 35,000*l.*, and the value of the plate and furniture 270,000*l.* The minor companies' halls are rated at about 20,000*l.* a year. It has been calculated that 175,000*l.* is expended yearly in rebuilding, repairs, payment of rates and taxes, and other charges connected with the halls, almshouses, schools, and buildings occupied or used by the companies, and improvements on their estates.

AN interesting report on the progress of Victoria has been presented to the Colonial Office. The annual value of rateable property in the municipalities of the colony at the end of 1882 was 7,433,812*l.* During eight years the total increase in the annual valuation amounted to 1,438,335*l.* The land alienated in fee-simple during 1882 was 442,009 acres, and the amount realised therefor was 598,079*l.*, or at the rate of 1*l.* 7*s.* 1*d.* per acre. The total extent alienated from the first settlement of the colony was 13,056,499 acres, for which 20,780,859*l.* was paid, being at the rate of 1*l.* 11*s.* 10*d.* an acre. The amount of building may be inferred when it is said that in 1882-83 there were over 95,000,000 bricks produced in the brickyards. Masons, plasterers, bricklayers, and carpenters are paid from 10*s.* to 12*s.* a day, without rations.

THE story has been revived according to which the statue of ADDISON in Westminster Abbey is not a portrait of the essayist. A picture was used by the sculptor, which was taken from Holland House, but afterwards it was discovered that the subject of it was Sir ANDREW FOUNTAINE. The statue was described by MACAULAY as being "skilfully graven." It represents ADDISON, he says, "as we can conceive him, clad in his dressing-gown, and freed from his wig, stepping from his parlour at Chelsea into his trim little garden, with the account of the Everlasting Club, or the Loves of Hilpa and Shalum, just finished for the next day's *Spectator*, in his hand." ADDISON died in 1719, and it is hardly credible that in little more than a century Holland House should have lost all clue to the authenticity of the portraits. On the other hand, the portrait is not characteristic, and doubt would seem to be implied in MACAULAY'S description. "The features are pleasing, the complexion is remarkably fair, but in the expression we trace rather the gentleness of his disposition than the force and keenness of his intellect." Another remarkable circumstance which adds to the puzzle is the number of miniatures of ADDISON which exist. They are apparently eighteenth-century work, and they correspond fairly well with the Holland House portrait. Notwithstanding all these portraits, when his essays and plays were published after his death there was no engraving of ADDISON in the volumes, although skilful etchers abounded in those days.

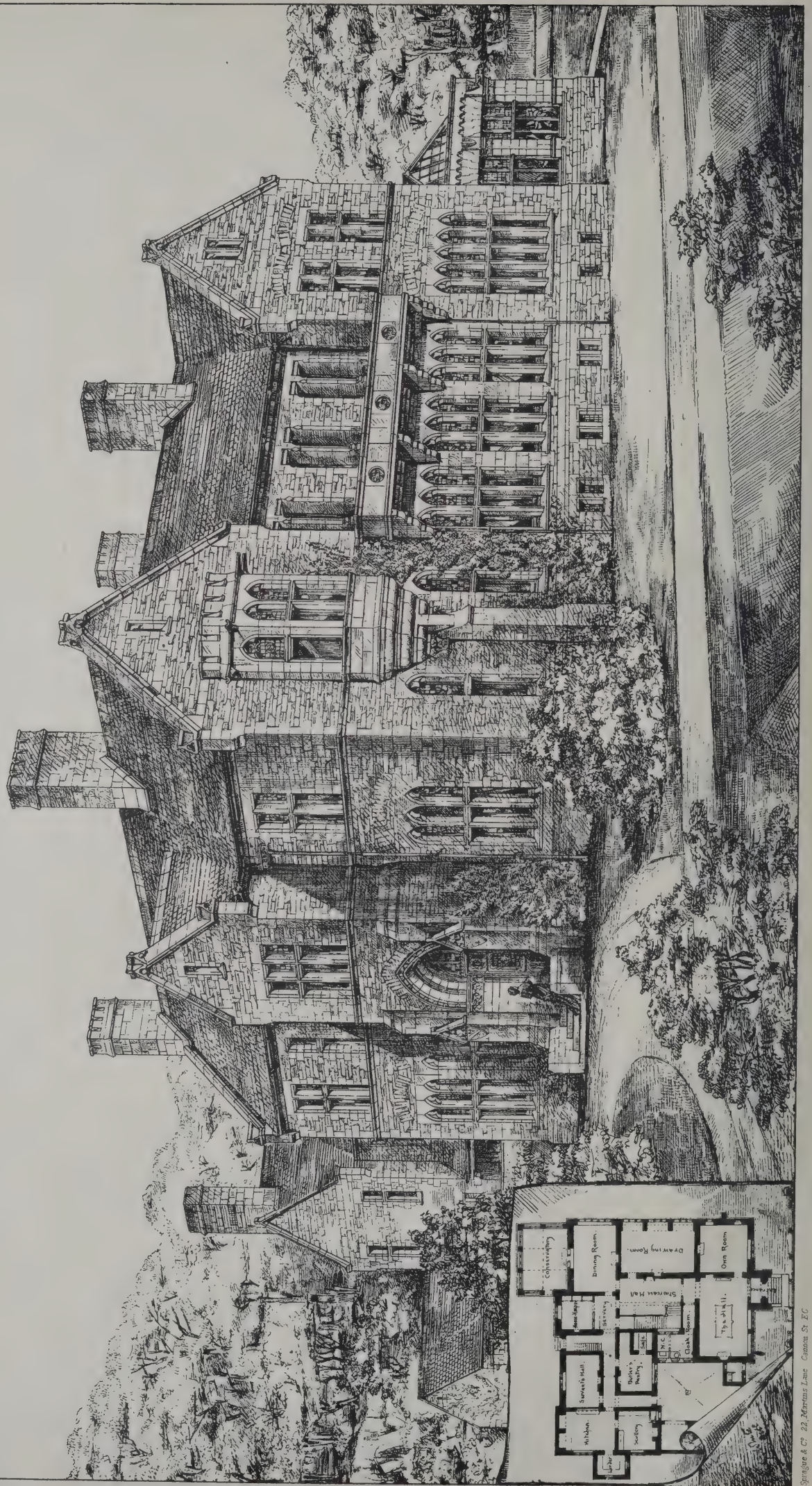
AT present there about seventeen hundred men employed in the construction of the Ship Canal across the isthmus of Corinth. On account of the scarcity of labourers in Greece, and the higher wages demanded by them, the workmen consist principally of Italians and Montenegrins. A large dredging machine has arrived at the works, and another has been ordered. Judging, however, from the progress already made, it seems probable that more than double the time originally calculated (which was fixed at three years) will be requisite for the completion of the works. The canal, when finished, will no doubt be generally used by steam vessels from the Adriatic bound to Athens and Constantinople, and *vice versa*. But it appears doubtful whether it will be much employed by British merchant steamers in the Mediterranean, either going to or returning from Constantinople and ports in the Black Sea, excepting during heavy weather and gales, when the route by the canal may be preferred to encountering detention by rough and stormy weather off Cape Matapan.

ACCORDING to the report of Dr. APPELL, of the South Kensington Museum, 884 publications relating to fine art, or especially useful to art students, have been issued during the year 1883. They are as follows:—310 publications in English, 292 in German, 223 in French, 28 in Italian, 16 in Swedish and Danish, 8 in Dutch, and 7 in Spanish. 781 of these publications have been acquired for the National Art Library, namely, 307 English and 474 foreign works.









DOUBLEBOIS, CORNWALL.  
CHRISTOPHER & WHITE, ARCHTS





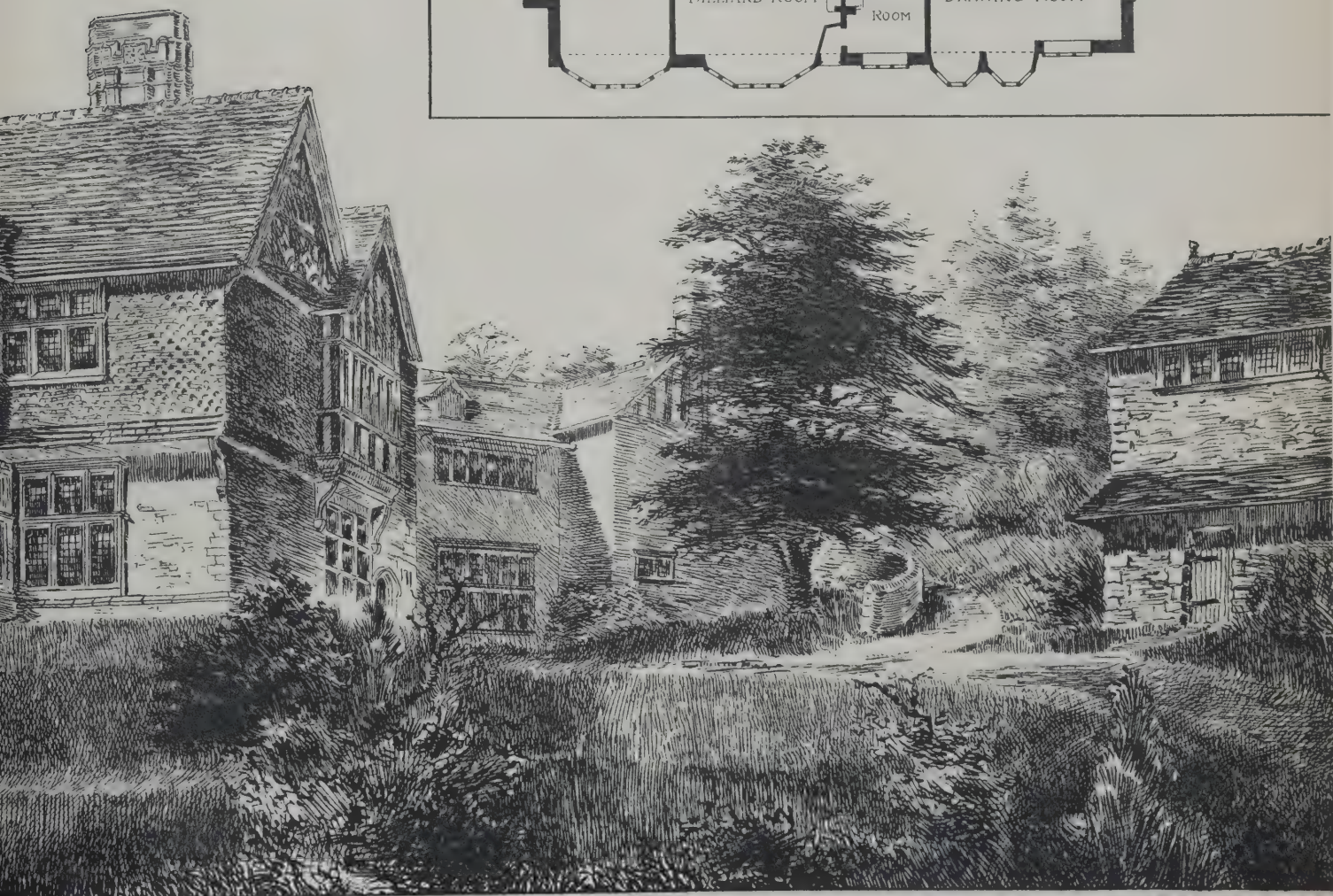




"BRYERS," NEAR  
FOR J. R. B.  
R. KNILL FREEMAN



June 28<sup>th</sup> 1884.



WINDERMERE.  
ON ESQ.  
RIBA. ARCHITECT.









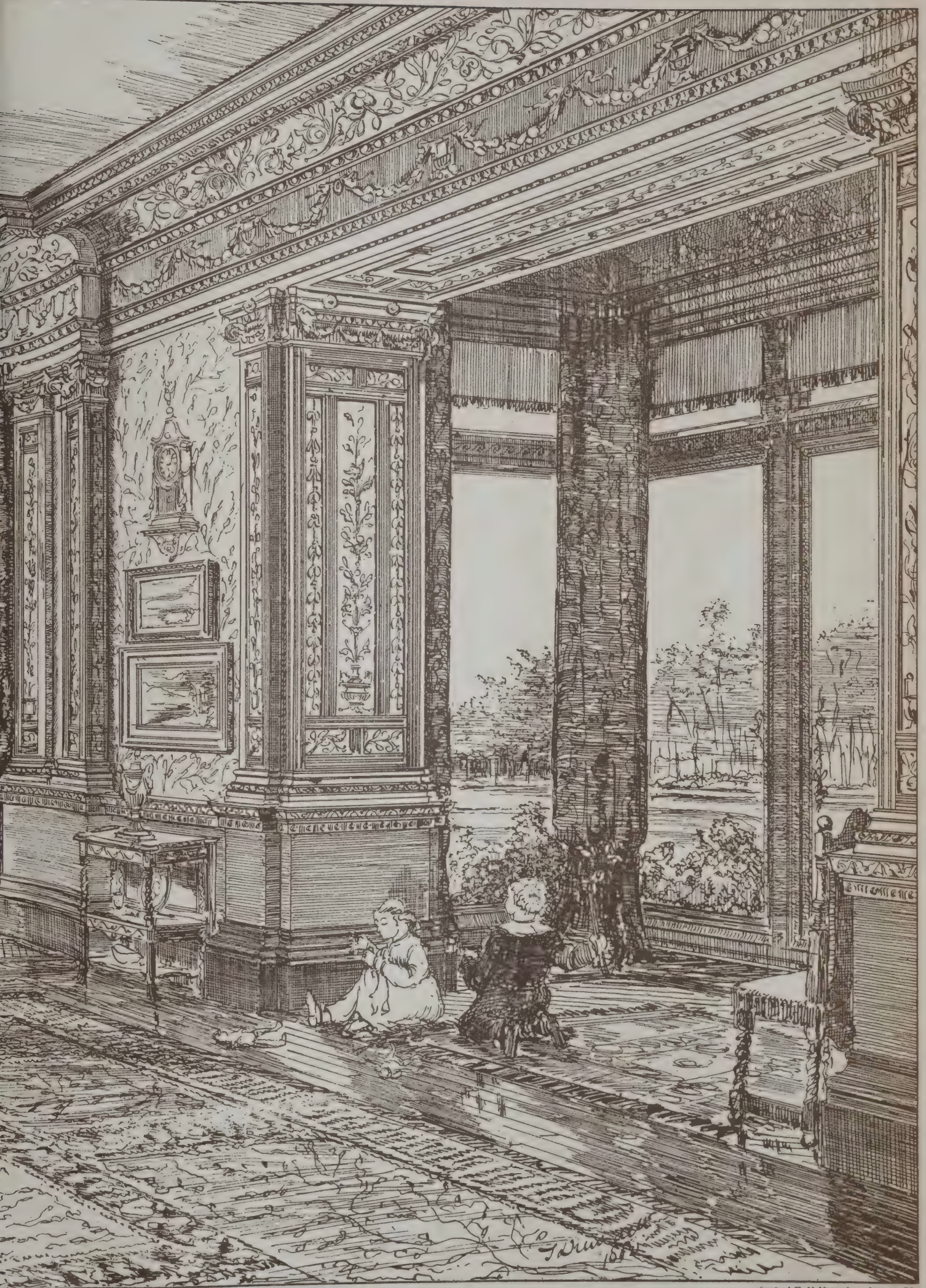




DRAWING ROOM, BLACKHEATH

THOS H. DREW, F.R.S.







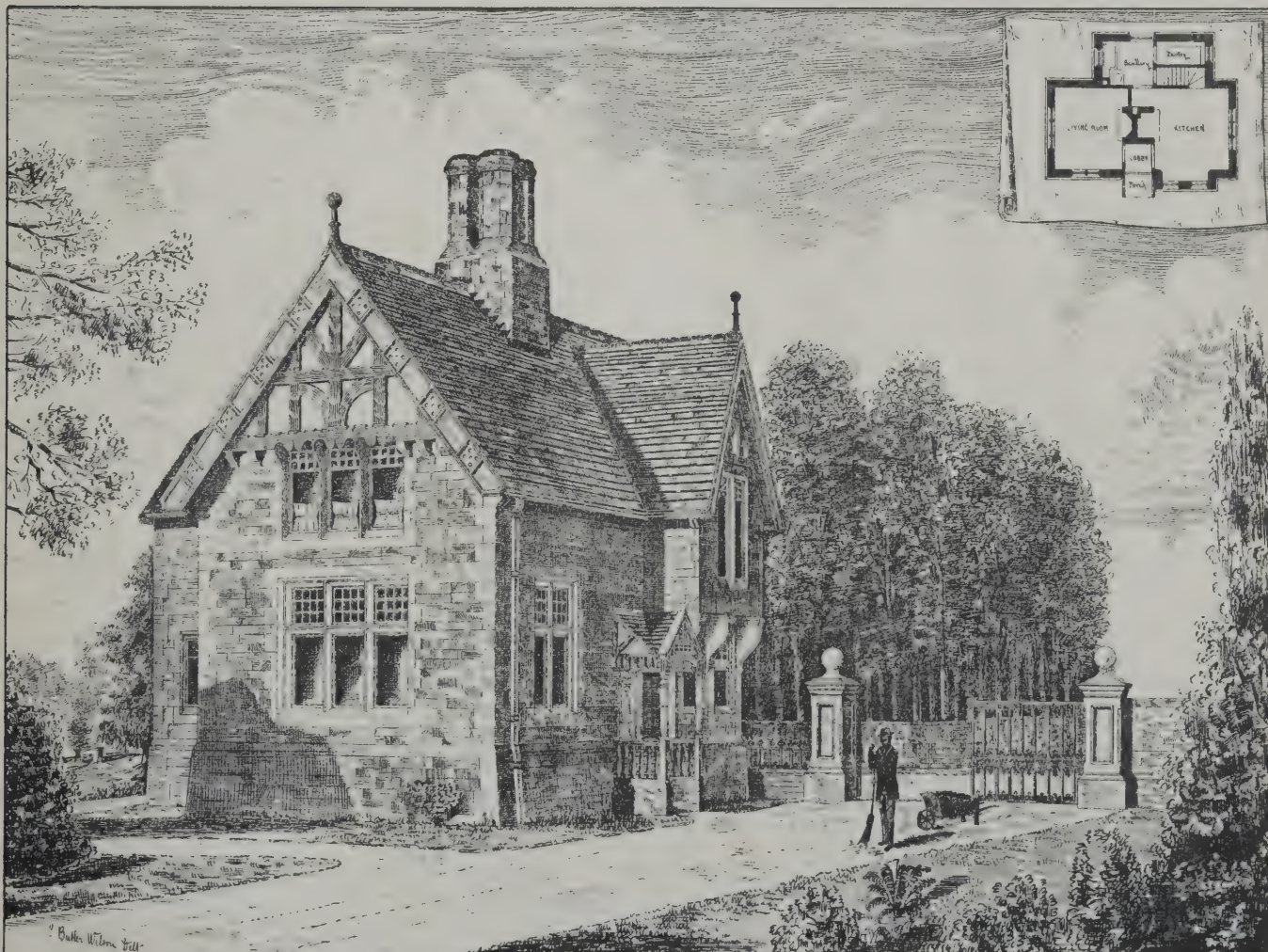




The Architect, June 28<sup>th</sup> 1884.

Restorations to Milverton House Knowle Warwickshire.  
for Gideon Gould Esq<sup>r</sup> Built A.D. 1380

Lewis W<sup>m</sup> Gould Arch<sup>t</sup>  
Moseley Birmingham



Entrance Lodge ROUNDHAY for F Green Esq<sup>r</sup> James Wilson

Architect Leeds

Sprague & Co 22, Mark Lane, Cannon St EC







## ILLUSTRATIONS.

BRYERS, WINDERMERE.

THIS house, now in course of erection for Mr. J. R. BRIDSON, is situated at Sawrey, on the Hawkshead road, near Windermere. An old farmhouse and cottage are being converted into kitchens and offices. The new building contains the entertaining rooms, which are so placed as to command the best view of the lake. The stonework will be from local quarries, with red sandstone dressings, the upper portions being in post and plaster, with some parts tile hung. The roofs will be tiled.

Mr. R. KNILL FREEMAN, F.R.I.B.A., of Bolton-le-Moors, is the architect.

DRAWING-ROOM, BLACKHEATH, CLONTARF, CO. DUBLIN.

THIS drawing-room was erected some time ago from the designs of Mr. THOMAS DREW, R.H.A. As the scenery in the neighbourhood of the house is picturesque, ample window space was given to allow of its enjoyment, and the style was considered to be suitable for a district in which before the Union Classical houses were not uncommon.

DOUBLEBOIS, CORNWALL.

THE accompanying illustration shows the principal and entrance fronts of the residence now in course of erection for Mr. GEORGE E. HERMON, at Doublebois, near Liskeard. The house is situated on the side of a steep hill, sloping towards the river Fowey. It commands extensive views over the valley and well-wooded hills opposite, and is sheltered on the north and east by rising ground and a belt of trees. The main walls of the house are built of local stone rock faced externally, with brick linings, and a hollow space as a protection against damp. The strings and quoins are of granite, the general dressings of Hamhill stone. The interior is finished chiefly in pitch pine, but the dado and other joinery in the drawing-room and chimneypieces and overmantels are of teak. The house is being lighted by atmospheric gas by Messrs. EDMUNDSON, of Great George Street, S.W. The ornamental glazing generally is being executed by Messrs. FOURACRE & WATSON, of Plymouth.

The general contractor is Mr. PETHICK, of Norley Yard, Plymouth, who is also building lodge, stabling, gardener's house, hot-houses, &c.

Messrs. CHRISTOPHER & WHITE, of 16 Bloomsbury Square, W.C., are the architects.

ENTRANCE LODGE, ROUNDHAY, LEEDS.

THIS lodge has been erected upon the estate of Mr. THOMAS GREEN, at Askel Hill. Handsome stables have been built. Extensive alterations and additions have been made to the house, and terraces of dressed stone laid out in front. A new carriage drive has been formed across the valley, with a stone bridge over the stream.

The whole of the works were carried out from the designs and under the superintendence of Mr. JAMES WILSON, architect, of Leeds, at a total cost of 6,000/.

MILVERTON HOUSE, MOSELEY, BIRMINGHAM.

THE house shown in the illustration is one of the oldest in the Birmingham district. It has lately been remodelled under the direction of Mr. L. W. GOOLD, and now forms a comfortable residence.

## MANCHESTER SOCIETY OF ARCHITECTS.

A REPORT of the Manchester Society of Architects to the non-metropolitan members of the Royal Institute of British Architects has just been issued. It deals with the proceedings instituted so long ago as February, 1882, to bring about some modification of the rules of the Royal Institute so as to give non-metropolitan Fellows a better opportunity of making known and giving effect to their views on any important matter affecting the profession generally. The result of the inquiries and correspondence is thus stated:—"It will be seen that in the opinion of the legal adviser of the Institute, the charter stands in the way of any modification of the arrangements such as were suggested by the

Joint Committee, and although the Council of this Society is not prepared to consider that the charter dated 1837 should be allowed to cripple that which should be an important and powerful association fifty years afterwards when circumstances have entirely changed; still, it would be fair to wait the result of the suggested modifications which will be tried at the next elections of officers. It is evident that it is the desire of the Council of the Institute to meet the wishes of the non-resident Fellows as far as practicable, and as it must also be the desire of all the members to increase the powers of the Society to its fullest extent, and to make it what it should be—a society representing the profession throughout the whole country—it is in the opinion of this Society advisable to keep the matter in view, and to bring it forward again if the arrangements now being carried out in the election of officers for the next session are found not to have the desired effect."

## MR. RUSKIN ON MINERALOGY.

THE annual meeting of the Mineralogical Society of Great Britain and Ireland was held in Edinburgh on Tuesday. Professor Geikie acted as chairman, in the absence of the president, the Rev. Professor Bonney.

The first paper read was one by Professor Ruskin, on "Forms of Silica." The author began by congratulating the Society on this occasion of its meeting in the capital of a country which was itself one magnificent mineralogical specimen, reaching from Cheviot to Cape Wrath, and which concentrated into the most convenient compass and presented in the most distinctly instructive form examples of every mineralogical phenomenon and process which had taken place in the construction of the world. He also felicitated himself on the permission thus given him to bring before the members a question which in Edinburgh of all cities of the world at present constructed it should be easiest to solve, and which (his father being Edinburgh born) was very early submitted to his childish mind, and had been more or less the occupation of his best wits ever since—in vain—the production, namely, and the painting of a Scotch pebble. He was the more happy in this unexpected privilege because though an old member of the Geological Society, his geological observations had always been as completely ignored by that Society as his remarks on political economy by the directors of the Bank of England; and although he had respectfully solicited from them the charity of their assistance in so small a matter as the explanation of an agate stone on the forefinger of an alderman, they still discoursed on the catastrophes of chaos and the processes of creation, without being able to tell why a slate splits or how a pebble was coloured. In Scotland the main questions respecting those two main forms of silica—pebble or crystal—were all put to them with a close solicitude by the beautiful conditions of the agate and the glowing colours of the cairngorm, which had always variegated and illuminated the favourite jewellery of Scottish laird and lassie. Might he hope, with special reference to the

Favourite gem  
Of Scotland's mountain diadem,

to prevail on some Scottish mineralogist to take up the hitherto totally neglected subject of the relation of colour in minerals to their shape and substance; why, for instance, large and well-developed quartz crystals were frequently topaz colour, a smoke colour—never rose colour; while massive quartz might be rose colour and pure white or grey, but never smoke colour. Again, why amethyst quartz might continually, as at Schemnitz and other places, be infinitely complex and multiplex in crystallisation, but never warped, while smoky quartz might be continually found warped, but never in the amethystine way multiplex. Why, again, smoky quartz and cairngorm were continually found in short crystals, but never in long slender ones; while beryl was usually short and even tabular, and green beryl long, almost in proportion to its purity. Might he also hope that the efforts of the Mineralogical Society might be directed to the formation of a museum of what might be called mineral geology, showing examples of all familiar minerals in association with their native rocks on a sufficiently large and intelligible scale. Proceeding with the subject matter of his paper, Professor Ruskin pointed out that there were at least six states of siliceous substance which were entirely distinct—flint, jasper, chalcedony, hyalite, opal, and quartz. They were only liable to be confused with each other in bad specimens; each had its own special and separate character, and needed peculiar circumstances for its production and development. In support of his view, the Professor directed attention to a beautiful collection of precious stones which had been sent to illustrate his paper from his museum at Sheffield. Another point was that contorted gneiss, which had hitherto been explained as produced by lateral pressure, was due to crystallisation. After describing the distinguishing characteristics of the specimens, and where they occurred, Professor Ruskin submitted that no movement of rocks on a large scale could ever be explained until they understood rightly the formation of a quartz vein and the growth—to take the most familiar of fusible minerals—of an ice-crystal. And he would



especially plead with the younger members of the Society that they should quit themselves of the idea that they needed large laboratories, fine microscopes, or rare minerals for the effective pursuit of their science. A quick eye, a candid mind, and an earnest heart were all the microscopes and laboratories which any of them needed, and with a little clay, sand, salt, and sugar a man might find out more of the methods of geological phenomena than ever were known to Sir Charles Lyell. Of the interest and entertainment of such unpretending science he hoped the children of this generation might know more than their fathers, and that the study of the earth, which hitherto had shown them little more than the monsters of a chaotic past, might at last interpret for them the beautiful work of the creative present, and lead them day by day to find a till then unthought-of loveliness in the rock and a till then uncounted value in the gem.

The Chairman, commenting on the paper, said that the whole question of the origin of those forms of silica was an extremely difficult one, and expressed his conviction that it could hardly be so interpreted as Professor Ruskin would make out.

### SOCIETY OF ARTS.

THE council of the Society of Arts have awarded the Society's silver medals to the following readers of papers during the session, 1883-4:—To the Most Hon. the Marquis of Lorne, K.T., for his paper on "Canada and its Products." To Rev. J. A. Rivington, for his paper on a "New Process of Permanent Mural Painting, invented by Joseph Keim." To C. V. Boys, for his paper on "Bicycles and Tricycles." To Professor Fleeming Jenkin, F.R.S., for his paper on "Telpherage." To I. Probert, for his paper on "Primary Batteries for Electric Lighting." To H. H. Johnston, for his paper on "The Portuguese Colonies of West Africa." To Professor Sylvanus P. Thompson, for his paper on "Recent Progress in Dynamo-Electric Machinery." To Edward C. Stanford, F.C.S., for his paper on "Economic Applications of Seaweed." To W. Seton-Karr, for his paper on "The New Bengal Rent Bill." To C. Purdon Clarke, C.I.E., for his paper on "Street Architecture in India."

Thanks were voted to the following members of council for the papers read by them:—To W. H. Preece, F.R.S., Vice-President of the Society, for his paper on "The Progress of Electric Lighting." To B. W. Richardson, M.D., F.R.S., Vice-President of the Society, for his paper on "Vital Steps in Sanitary Progress." To Col. Webber, R.E., C.B., Member of Council, for his paper on "Telegraph Tariffs." To B. Francis Cobb, Vice-President of the Society, for his paper on "Borneo." To J. M. Maclean, Member of Council, for his paper on "State Monopoly of Railways in India." To W. G. Pedder, Member of Council, for his paper on "The Existing Law of Landlord and Tenant in India."

### THE ARUNDEL SOCIETY.

THE report which was read at the 35th annual meeting of the Arundel Society states that there had been a considerable falling off in the receipts during the past year, and at the same time an increase in the expenditure. The position of the Society, however, is so strong that the exercise of a moderate economy will, it is hoped, speedily restore its financial equilibrium. There had been a considerable accession of new members, and the work of the Society is being pursued with the usual steadiness and success. The first publication of the present year, distributed among subscribers, is taken from the frescoes of Benozzo Gozzoli in the Riccardi Chapel at Florence. The second will be from the frescoes in the refectory of the convent of St. Mark at Florence, attributed in part to Fra Bartolommeo, and in part to Sogliani, and representing the supper and miraculous vision of St. Dominick and his brethren. Next year the illustration of the Riccardi Chapel will be continued in the first annual publication, which will consist of a chromolithograph corresponding to that brought out this year, and representing the group of angels on the other side of the chapel altar. The second annual publication for 1885 will be a chromolithograph, now being prepared by Herr Frick, from a painting by Fiorenzo di Lorenzo, a rare Umbrian master of the fifteenth century. Its subject is *The Miraculous Cure of a Wounded Man*, by S. Bernardino. Of the three chromolithographs mentioned in last year's report as preparing for publication in the occasional class, one only has been yet brought out, that executed by Herr Frick, representing the allegorical figure of Theology. This, with the three similar subjects of Philosophy, Jurisprudence, and Poetry, printed in colour, completes the illustration of the series of such figures painted by Raphael in the Vatican. The other two proposed chromolithographs, one representing the *Nursing of Bacchus*, from an antique Roman wall painting, the second the *Annunciation*, from a picture attributed to Simone Memmi, are still in preparation. Mr. Perkins's introduction to the illustrated work on Italian sepulchral monuments was completed and brought out in the autumn of last year. Signor

Desideri has copied the four allegorical groups painted in fresco by Paolo Veronese in the Villa Masere, and has since been making drawings from the series of paintings by Vittore Carpaccio in the church of St. Giorgio dei Schiavoni at Venice, illustrating the lives of St. Jerome and St. George. All the copies from Paolo Veronese, and one of those from Carpaccio, are now on view at the Society's rooms. A water-colour drawing by Signor Constantini, after the picture of *Spring*, by Sandro Botticelli, now in the Academy of Fine Arts at Florence, was bought by the council last year, and may also be seen at the Society's rooms. Regret was expressed at the meeting at the death in December last of Mr. F. Lambe Price, the Society's secretary. Mr. Douglas Hamilton Gordon has been appointed his successor, with Mr. A. H. Brice as assistant.

### ARTISTS AND DEALERS.

A REMARKABLE interpleader suit arising out of the case of *Musson v. Holland* was heard last week at the Nottingham County Court. Five paintings by Mr. John Holland, a Nottingham artist, which were among those exhibited in the Art Museum, Nottingham Castle, had been seized by an execution creditor. It was alleged by Mr. Bestow, a picture dealer, that the pictures were his property, although exhibited in Mr. Holland's name as if unsold. It appeared that on January 1, 1881, Mr. Holland agreed that all the pictures which he painted should be exclusively for Mr. Bestow, who, from time to time, supplied him with money as he required it, and also with paints, canvas, &c. About 800*l.* had been paid, and Mr. Bestow received from Mr. Holland pictures which he had painted. The latter, in 1883, was induced to give a bill for some gambling transaction, and that bill was discounted by the execution creditor (Mr. Musson). Mr. Holland was sued upon the bill, and there being no defence, judgment was given against him. This, however, was never mentioned by him to Mr. Bestow, who was in ignorance of it. At that time Mr. Bestow had in his possession the five pictures which had been sent to him by the defendant, unframed. They consisted of three oil paintings and two water-colours, which were painted subsequently. They were framed for the claimant by Mr. Warner, and one of them, *Fort St. Mary, Isle of Man*, was this year sent to the Royal Academy by Mr. Bestow, but it failed to obtain admission, and being brought back from London it was met at the railway station by Mr. Bestow and Mr. Warner, and, with the other pictures, was taken to the Art Museum, Nottingham Castle. It appeared that there was a rule on the minutes of the museum that all pictures submitted there for sale must be *bonâ fide* the property of the artist, and when Mr. Bestow sent the pictures in question to the Castle he entered them in the name of John Holland.

The Judge pointed out that such an arrangement was contrary to the rules of the museum, but counsel replied that one-half of the pictures exhibited in the Nottingham Castle Museum which are supposed to be the property of the artists are not so, and that a member of the Society of Artists could be called to prove the practice. But the question really was, to whom did the pictures actually belong. Five pictures were hung up in Mr. Holland's name, and they were seized by the execution creditor, but Mr. Bestow had purchased them of Mr. Holland under the agreement referred to.

Mr. Bestow said that on January 1, 1881, he made an arrangement with Mr. Holland that he should have all the pictures he painted, and he supplied him with canvas and paints. Since January 10, 1881, he had paid him above 800*l.* The five pictures were sent to witness's house unframed, and a person named Warner framed them. One of the pictures was sent to the Royal Academy, but was returned, and witness exhibited this and four other pictures at the Castle Museum. Witness had always exhibited pictures in Mr. Holland's name.

Cross-examined: Witness sent up the pictures to the Castle. It was possible that Mr. Musson, the execution creditor, might believe that under the rules of the Castle Museum authorities the pictures belonged to Mr. Holland. When a picture was sold a red star was affixed to it. If the pictures had been sold in the name of Mr. Holland, witness would have received the money from that gentleman. Witness did not take any bill of sale from Mr. Holland. He had not given a specific sum for any of the pictures painted by him. He had paid him at the rate of about 5*l.* per week.

By the Judge: The curator at the museum had a schedule of prices. Mr. Wallis, the curator, sent a message to witness, because he knew that he and Mr. Holland had business relations.

Mr. John Holland was then called, and he confirmed the evidence given by Mr. Bestow. It was true that since January 1881, Mr. Bestow had paid him 800*l.* Mr. Bestow informed him that he proposed to send the five pictures to the local artists' exhibition at the Castle, in witness's name. Witness had had other pictures exhibited, which he painted, but which did not belong to him.

The Judge said that so far the evidence showed that Mr. Holland, who belonged to an honourable profession, acted in contravention of the rules of the authorities of the museum.

In cross-examination witness said the Art Union of Notting-



ham was formed for the protection of young artists, but the latter, he thought, had no better friend than Mr. Bestow. He did not think there was a single artist in Nottingham who had not infringed the rule laid down by the authorities of the museum.

Mr. Redgate stated that it was an ordinary thing for artists to send pictures to the museum in their name although they had previously been sold. The rule was constantly broken, and the committee of the museum knew this to be the case.

Mr. Samuel Holland said he was one of six gentlemen who composed the council of the Nottingham Society of Arts. The rule referred to was never taken any notice of. The rule was to break the rule.

By the Judge: He could not say why the rule had been made, or why it had not been repealed.

Examination continued: He was aware of the arrangement existing between his brother and Mr. Bestow.

Cross-examined: Mr. Wallis knew of the arrangement for constantly breaking the rule. Witness was both an exhibitor and a member of the hanging committee. He believed that those of the public who were interested in art knew that there were gentlemen in the background who were the real owners of some of the pictures exhibited.

The Judge said he thought the committee ought to be aware whether the pictures were the property of the painter in whose name they were exhibited. Mr. Bestow would receive from the curator the value of any picture sold of which Mr. John Holland was the painter.

Mr. Warner said he knew that Mr. Holland was painting all his pictures for Mr. Bestow. Witness framed pictures for Mr. Bestow. The painting, *Fort St. Mary*, was sent to the Royal Academy, and when it was returned witness took it with four other pictures to the Castle Museum.

Counsel for the judgment creditor said that, notwithstanding the agreement between Mr. Bestow and Mr. Holland, the exhibition committee had no knowledge but that the pictures belonged to the latter, and the execution creditor seized them, believing *bonâ fide* that Mr. Holland was the unencumbered owner of the pictures. It was quite clear that Mr. Bestow might have perfected his title to the pictures by having the red star affixed to them, and by having it inserted in the catalogue that he was the owner of them, but he understood that the public would not like it to be known that the exhibition, instead of being for the benefit of rising local artists, was turned to the advantage of speculators.

The Judge said his impression was that the rules of the exhibition committee had been broken, but he thought on the whole of the evidence the pictures were in truth the property of Mr. Bestow, and that from first to last he had used them and disposed of them as his property. The sole question was whether this was affected by the fact that the pictures were exhibited in the defendant's name. Under the circumstances, looking at the position and conduct of the parties, he should give judgment for the claimant, but he should not give any costs whatever.

The Judge allowed the pictures to be given up to Mr. Bestow, but his honour thought the possession money ought to be paid by the claimant.

### SCHOOLS OF ART IN ITALY.

THE following notes on schools of art applied to industry in Milan, Bologna, Padua, Venice, Rome, Naples, and Florence have been prepared by Mr. Thomas Armstrong, the Director for Art under the Science and Art Department:—

While in Italy, during the months of November and December, on business connected with the museum, I was able to see something of the schools of applied art (*Arte applicata all' Industria*) in the towns I visited. Generally I found activity on the part of the governing bodies and eagerness for instruction among the working classes. There is no uniform system for the whole of the kingdom, but in essentials the course of instruction, which in its lower stages is very much like our own, was the same in all the schools I visited. The programme of a State-aided school must be approved by the Minister.

Though the systems resemble our own, their application is made under very different conditions. The schools are free, and there is no such thing known as payment by results. There are prizes and certificates, but they are not very numerous or important, and the student comes to the school for instruction which shall be useful to him in his actual or future calling. He has to submit to follow the course laid down in the regulations of the school which, in the earlier stages, is common to all; but the professor, when a certain degree of efficiency is attained, puts each to do that kind of work which has the most direct bearing in his trade. The objects of the schools, as declared in the programme of that of Padua, are:—"To provide elementary instruction in geometry applied to the arts, in constructive drawing applied to the work of the joiner, the builder (mason, or bricklayer), the carver, &c., and in ornamental freehand drawing applied to these trades; in elementary architectural drawing, and in modelling in its various applications." This is the programme and from what I saw I think that it is well carried out.

The artisans I saw at work were for the most part engaged in the building trades, where the work is heavy and the hours of labour are much longer than in England. I was struck by their orderly behaviour, their attention to their work, the tidiness of their appearance and, above all, by the neat and cleanly manner in which their drawings were executed, which, considering the rough work they had been at all day, seemed extraordinary. I noticed that there is, among the class which feeds these schools in Italy, a greater appearance of material well-being than could be seen three or four years ago. The schools are generally supported by joint contributions of the municipality, the provinces, the Minister of Agriculture and Commerce, and sometimes by the Chamber of Commerce of the town.

In Milan there is an artisan school for art applied to industry, in the Brera, adjacent to the Academy of Fine Arts. It is open from six to eight in the evening, and inscribed on its books are from 800 to 850 students, who are bound to attend regularly, for he who is absent three nights in succession without giving a proper explanation loses his place. There were at that time 400 candidates waiting for admission when room could be found for them. I visited the school on a Saturday night, when the attendance is always thinner, but I found some 600 students. Most of these were doing the kind of work produced in our art classes, and, so far as I was able to examine, it was generally good. There were thirty modelling. This school was in many respects the most interesting I saw from its numbers and its appearance of vitality; but there was nothing in the system of instruction differing from our own which I thought worthy of note, with this exception, that elaborate shading is not encouraged. In this particular we stand alone. In the schools I visited the shading was generally done with lead pencil, and, though the work was careful and neat enough, there were none of the large and very carefully shaded drawings which are common with us. It is supplemented by a "Superior School of Art applied to Industry," which is lodged in the same building with the Civic Museum of Applied Art in the Public Gardens.

At Bologna I found a school in which there were 65 students at work drawing at desks, in a well-lighted room, from flat examples, for the most part of ornament. I found the young men were joiners, masons, decorative painters, and workers in metal. I saw the more advanced of the two sections, which comes to work on the evenings of Tuesday, Thursday, and Saturday. All of the students in this section had been in the school more than one year. The first year students attend on the other three nights, and draw from flat examples, something like those of our second grade. Those I saw were working from lithographs of ornament, generally shaded; but some masons were doing architectural work, and some geometry was being studied. I noticed a student who was copying a sheet of lithographs of trunks and travelling-bags, who said he was assistant to a trunkmaker, and that such practice was useful to him in his trade, as drawings had to be made whenever a new form of trunk was ordered. The drawings were generally well executed, and the copies were never of the same size as the examples. There were 105 students inscribed. Modelling is taught three nights in the winter, and is practised by many students from the drawing-class.

Professor Francesco Bonghi, who showed me the school in the most painstaking and obliging manner, said there is not the same thirst for instruction in Bologna as in Milan. He attached much importance to prizes such as were formerly given more freely by the municipality; small prizes of materials for drawing, such as paper, pencils, &c., which to the very poor made study easier. He used to have the school open on Sundays for those advanced students who were willing to come, but this practice was discouraged on the grounds that these students were taught things above their trades. Professor Bonghi has been there twenty-three years, and for the last fifteen or twenty the school must have been in much the same state as it is at present.

At Padua I saw a drawing school for artisans which is open in the evening to students above sixteen years of age who must be able to read and write. There are classes in the day-time for boys over twelve, from whom a somewhat higher qualification is required. All pass through a course of geometry. The beginners were working from an example like our second grade, drawn on a slate by the master; others were working from flat examples of ornament. A few were drawing from casts of ornament and both casts and flat examples were so disposed as to be available at the same time for a number of students. Each example in such instances was lighted by one large isolated lamp with a reflector, while each student had beside him a small shaded lamp on a stand about four feet high; this method of lighting answered very well, though the oil lamp used gives a much less vivid light than gas, to which we are accustomed. A class of eighteen or twenty were at work in another room from casts of heads and extremities, lighted in the same manner, and some were copying the Elgin horse's head and a large cast of the head of a lion. There was no modelling. Thirty-seven students were on the books for the morning classes, and thirty-six for those in the evening; some attended both. Building construction is taught as well as a little architecture, and there is technical instruction in carving wood and stone. The school is open on Sundays for those who choose to



attend. Prizes are given to the more advanced students for works of invention. In the lower stages certificates are awarded to those who are successful at the examinations. The school prizes are not given in money, but in materials, such as paint-boxes, boxes of instruments, photographs, or tools suitable for use in the technical school. Last year a wood-carver received tools to the amount of 60 lire.

The Banca Mutua Popolare of Padua gives 360 lire a year in four prizes. In these cases half the sum is handed over to the successful competitor in cash, and in a banking book, which is given to him, he receives credit for the remainder. A sum of 50 or 60 lire, arising from property belonging to a former school, is given to the best student of the year. The school itself spends about 300 lire in prizes. Silver medals are awarded.

I was shown a number of works executed by students of the school, such as plaster models of ornament, engraved wood blocks with prints taken from them, and wood carvings. The last were very good of their kind. There were wooden models of building construction done in the school, which were well executed. The school is not a large one, but it seems in a very healthy state.

There is but little encouragement, I was told, for art workmanship in Padua, so the best students go to seek work in other towns. I went to the school with no introduction, but was received in the most obliging manner by the director, Signor Cannella, and the other professors, and had the printed papers of the school given to me.

In Venice I found a very interesting school which has 125 students, with a large number, for whom there is no room, waiting to come in. I visited the school both in the evening and on Sunday morning; on the latter occasion there was an attendance of fifty or sixty. A copy of the printed programme was given to me and is to be found in the Educational Library with other documents of the same kind. The course of study is much the same as that of the upper school at Milan. I noticed large flat examples of flowers in white on a black ground.

In the first half year, after beginning with geometry and free-hand, models made of wire are used and memory exercises are done. Next comes a course of drawing which I have not seen in use elsewhere. Nature printed leaves are used as examples. The larger kinds of leaves are chosen, and the examples are made by Professor Allegri of this school. Exercises from memory are done in nearly all the courses. Here, as in Milan, the students' work, after a grounding common to all, is planned with a view to their trades.

The modellers here generally draw for a year before beginning to work in clay. I saw very good work by the more advanced students, and was much struck with hands and feet modelled after casts from nature made in the school. The examples are among the best I have ever seen of the kind, and I should be glad if the practice of casting hands and feet from nature, when good models can be obtained, could be introduced into our schools. The casts generally in use in this and other schools are excellent in their sharpness and cleanliness. Casts from worn-out moulds such as we have so long been accustomed to in our English schools are not tolerated in Italy. I was much impressed with the interest Signor Stella, the director, and his staff showed in their duties. They are doing very good work and, from what I heard in Venice, I believe their efforts are appreciated.

I visited in Rome an evening school in the Via Urbana ai Monti, which is directed by Professor Echert. The students must be over seventeen and must be following a trade. No previous practice in drawing of any kind is required for entrance, but candidates for admission have to pass an examination in writing from dictation and in the four elementary rules of arithmetic. The expenses of the school amount annually to 30,000 lire, 1,000 or 1,500 being contributed by the Minister of Agriculture and Commerce, who has the right to an annual inspection.

During the first year all do geometry. The geometrical drawings I saw, which were very neatly executed, were like those done in our own schools. They are from printed examples, never the same size, and from the black board. Decorators only work at this one year. There is one examination every year on the results of which every pupil has a certificate. Prizes are given by the municipality in money, 10, 15, or 20 lire, and others of 20 to 50 lire from the Minister, while a private person provides funds for ten others of 50 lire each. The prize works are kept by the school, and all works, good or bad, are exhibited. Materials are furnished to the students. There is no modelling done in Via Urbana ai Monti. It is taught in one of the other two schools of the same kind, but in all these schools there are only eight who learn. Modelling is allowed after one year of geometry and one of drawing of ornament. In their third or fourth year decorative painters do perspective in one of the other schools.

I saw much good work in progress, especially architectural drawings, done generally from flat examples enlarged to scale, drawings of building constructions and machinery, and wooden models of roofs. There were good shaded works from casts of plants, and very fair specimens of model drawing in Indian ink. The shading, which was generally good, was done with lead pencil. Panels of flat decoration were being done with Indian ink. Sometimes the students are set to do plans of the school building from

measurement, and the professor gives small pencil sketches of elevations, which are carried out much larger with sections. Some of these architectural drawings, being done by joiners and masons, were large, and I admired the precision and the cleanliness of the work, which seemed to me extraordinary for men who had been at hard manual labour all day, and the working-day is longer there than with us. My visit took place just before Christmas, when artisans had to keep longer hours in order to get work finished, and consequently the attendance was below the average, which I was told was sixty-five; but of 100 or 120 inscribed there were about fifty who came regularly and worked hard. Employers are generally interested in the school; they visit it sometimes, and, in engaging workmen, give the preference to those who have been educated in the school.

The attendance in the three schools, which have been in existence about ten years, has been in 1878-79, 392; 1879-80, 317; 1880-81, 323. Now the number is somewhat greater. Nothing is done in the schools from the month of June till the middle of October, when the heat is too great for nightwork in rooms lighted by gas. There are four preparatory schools where younger boys are taught simple geometrical drawing and freehand. On the other hand, the advanced students who wish to carry their studies further can go to the upper school at St. Giuseppe, Capo le Case. I was shown a book of good drawings produced in this school which had been to the Milan exhibition, and among them were some of coloured decoration. Professor Echert was most kind in showing me the school and giving the fullest explanations.

At St. Giuseppe, Capo le Case, the upper school is housed in part of a disused convent, with the Museum of Applied Art. This is an upper school which only takes students who have already had instruction and practice in drawing. A certificate from another school and an examination in drawing from a cast of ornament are required for entrance. The school is open from seven till ten in the evening, and those who choose may come to work on Sundays. I was told that those whose trades required the study of perspective, such as decorative painters, were sent elsewhere for lessons.

For admission to the modelling class no drawing in this school need be done; the modellers were mostly engaged on reliefs. A young man was working in this class who had no trade or profession; he was doing it, he said, for a pastime. In going through this and other schools I had always asked the trade of a student when I stopped to look at his work, and this was the solitary instance of this kind of student; all the others had trades.

Among those of whose work I have taken notes were many goldsmiths, some engravers and lithographers, workers in stucco, and sculptor's workmen—"practiciens." Here I met with two students who had come from what they called the "priests' school." I heard good accounts of the teaching in this school, but was never able to visit it, and, indeed, am not quite sure that it is still in existence. In the technical part of this school I saw only one student at work, who was doing a wax model of a vase which was to be cast outside, but to be chased afterwards in the school. The professor for workers in metal is Signor Buzzari, who is with Augusto Castellani, the famous goldsmith. I saw other good works by advanced students, some of them going to the Turin exhibition, by carvers in wood and marble, and a model of part of a domed ceiling by a worker in stucco. Paper, pencils, and modelling tools are provided by the school. Plastellina, which never dries, or wax is used for the smaller models. The instruction is free, and 600 lire are annually spent in prizes and gold medals of 100 and 50 lire in value are given, as well as certificates of honourable mention.

I was shown a sort of exhibition of students' works, among which were many good models in wax for metal and glass work and original works which were good in design and execution. In many of them figures, treated ornamentally, were skillfully introduced. I saw no figure studies of the full-length living model; but here, and in the other schools, I believe a student who has made a good design is supplied with living models to carry it out.

The museum was established about ten years ago in the ex-convent of St. Lorenzo in Lucina, where accommodation was provided for it by the municipality; it was thence removed to the Collegio Romano for a time, and in January 1876 it was decided to increase its importance and practical utility by establishing schools in connection with it. At first the instruction was limited to some art industries already practised in Rome, but it was afterwards thought desirable to extend its scope, so says the programme, and teach the art of enamelling on metal, which was almost unknown in Rome. I did not see any specimens of this work in the school. In April 1879 the Minister of Agriculture and Commerce took the initiative in proposing a large subsidy to the museum in order to extend its educational influence throughout the whole kingdom. Under the new arrangement the central Government agreed to contribute 120,000 lire annually, and to pay the expenses of adaptation of part of the ex-convent of St. Giuseppe, Capo le Case, which the municipality conceded to the museum and schools. The latter, moreover, increased its subsidy from 10,000 lire to 30,000 lire, so the sum available annually for the two is now 150,000 lire, or 6,000*l.* sterling. The museum possesses many interesting specimens, both originals and reproductions. Provision is made on the premises for lithography, castings in plaster, and the



electrotype process, and for the sale at a low price of the reproductions obtained by these means. I was told that the museum authorities would be glad to make exchanges with the South Kensington Museum, and I should be glad to see some arrangement made to that end.

The late Alessandro Castellani, who was much interested in its formation, presented to it, among other interesting things, a set of moulds taken from the antique terra-cottas in the Campana collection, which were bought for the Louvre, and I should like us to have casts of these. This school has the great advantage of being housed in the same building as the museum. The upper school at Milan and that at Naples are also in this favourable position, but these latter have not such good collections, nor have they at command the large means for purchase now possessed by the Roman museum. Scholarships to be held by students from all parts of Italy are included in the Act of endowment. There were ninety-six students on the register at the time of my visit.

During my short visit of two and a half days to Naples I saw, besides the important school in the museum, a small one belonging to the Co-operative Society of Workmen which, like most others in Italy, is kept up jointly by the state, the province, and the municipality. This society, which has been in existence twenty-three years has seven such schools, and they have been at work ten years. Free instruction is given in drawing and in chemistry applied to the arts. All the students—there are 350 in the seven schools—do mechanical drawing. In one school modelling is taught, and in another scientific instruction bearing on dyeing, gilding, and painting is given.\* The drawings I saw were mostly done from flat examples, such as lithographs of heads, but drawing from the cast is practised.

The large school attached to the Museum of Applied Art has very spacious rooms and is well appointed, perhaps better than any school I saw in Italy; students generally come to it from preparatory schools, but it has been found expedient to establish a preparatory course in the building, and this class has 125 students. In the preparatory course all do geometry and freehand from flat examples, like our second grade, but somewhat larger. In the elementary schools in Naples some drawing is taught along with writing, and I was told that there is a tendency in all the other schools to so formulate their system of instruction that it shall lead up to that of the one in the museum, although there is no recognised connection. Students are admitted at twelve, but may remain until they are twenty-two; as a rule they stay in the school three years, but a few, after passing an examination, are allowed an extension of two years. There were at the time five such. There is no night school, and generally students give their whole time; in the morning they draw or model, and in the afternoon do technical work. There are fifteen who receive allowances for maintenance like those granted to our national scholars.

A very interesting and novel feature in this school is the system of paying the wages of workmen of proved capacity on the days of the week when they leave their work to attend the school. Some of those who receive maintenance come from the School of Fine Arts, and much good has been done by this means in raising the tone of the rest of the school. There are 110 or 120 ordinary students who work all day.

My visit fell on the day after Christmas when there were no students, but I was taken over the building in the most obliging manner by the Secretary, who gave up his holiday time to me. Among the works remaining in the school I saw many drawings done from flat examples, lithographs, which, after being copied in the same size, are afterwards done larger or smaller. There are no large figures to draw from, only heads and extremities being allowed. Living models are only supplied when advanced students have designed important works in which figures are used decoratively. The school professes to give instruction in the modelling and drawing of ornament, and of the figure only so far as it is applied to ornament. Lead pencil and chalk are used for drawing. I saw good modelled work from shells, fruit, foliage, and fish. The students are taught to make moulds for casting in plaster. The prizes consist of savings' bank books, with deposits of sums from 10 to 50 frs.

In the technical division I was shown works in clay which had been fired; vases and candelabra, decorated with flowers and figures, and very cleverly executed; models in wax for metal-work to be carried out in the school. There were tiles painted and fired in the school, which had been commissioned by the municipality for a pavement. These were well done in a bad way, much like our own work, and not nearly so good as the common tiles which have been long made in Naples.

The museum only dates from the autumn of 1883, and has not a large collection. On the walls hang textiles, and many photographs of good decorative work. There is a good case of Persian and Hispano-Moresque ware, and of old Neapolitan tiles; also a collection of old Capo di Monte ware. Specimens are shown of the art products of Naples at the present day, and there is a good deal of French pottery and a little English.

\* The society has other functions besides teaching. It advances money to workmen for the purchase of tools, on the guarantee of one other workman. It has a Sunday school where women are taught reading, writing, arithmetic, and other things useful in social life.

On arriving at Florence I was told that the School of Applied Art was closed while alterations were being made in the building, but Signor Bardini, the dealer, said this was not the case, and that he would make arrangements for me to visit it at noon on the following day, Sunday, for I was leaving for Milan in the evening. He most kindly accompanied me, and introduced me to the professors.

This is a day-school, and has no evening classes. There are 140 students, who are all above twelve years of age, and who pay 10 lire for the year. This is the only school I saw in which payment is required. It is supported by the municipality, the province, the central Government, the Chamber of Commerce. No previous practice is necessary for admission, and beginners do freehand and geometrical drawing concurrently. For the latter the examples are given on the blackboard, and are first copied freehand, being afterwards corrected with instruments. Enlarged examples of tarsia work are used as examples, the contours in the copies being filled with a tint. Every student is bound to acquire some knowledge of architecture. For three years there is a common system for all, but afterwards the student must choose his calling and do work specially adapted to it. The school is open four hours a day, and attendance during three is obligatory. There were no students at work while I was in the school, but I saw some of their works, which, for the most part, had been done in competition. Some of them showed great skill, as might have been expected from Florentine workmen. The printed papers of this school which have recently been prepared have only reached me just as this report must go to press.

It is declared in them that the object of the school is "to give artistic and technical instruction of a kind which may best further the growth of those Florentine industries which depend on the arts of drawing and modelling." In 1883 there were only seven students out of a total of 140, and in 1884 eight out of 146, who had not chosen their walk in life, and an opinion is expressed contrary to the establishment, in such schools as this one, of workshops for technical teaching, for it is held that a youth cannot really acquire practice in manufacture elsewhere than in a place where proper conditions of reality and competition are submitted to, and when the work is fairly submitted to industrial and commercial tests.

The importance of making studies of the figure, even from the living model, is dwelt on in this programme. Although great skill is shown by Italian workmen in the adaptations of the figure to decorative purposes, I saw no study from the living model going on, and heard of very little. The practice of drawing entire figures from casts is not nearly so common in these Italian schools as with us, or even in the French and German schools. Heads and extremities seem to be carefully studied from the excellent casts which are to be found everywhere.

## UNIVERSITY COLLEGE, LONDON.

THE following students have been successful in the examinations of the architectural classes under Professor T. R. Smith:—

*Fine Art.*—Donaldson silver medal, E. Nicholson, London. 2nd prize, Jose Suarez, Bogota. Third class, W. H. Eve, London, and E. T. King, London.

*Construction.*—Donaldson silver medal, E. W. Knight, Greenwich. 2nd prize, A. T. Bolton, London. 3rd certificate, \*Frank Taylor, London. 4th certificate, \*R. M. Hamilton, New Zealand. Second class, J. R. Morgan, London, and F. W. Quick, London. Third class, T. D. Atkinson, London; C. F. Blomfield, London; E. F. King, London; F. Swift, Peckham; and J. M. Watson, London.

*Modern Practice.*—Prize, W. C. Jones, Forest Hill. 2nd certificate, \*J. R. Morgan, London. 3rd certificate, \*E. L. Conder, Leeds and London. 4th certificate, \*R. L. Cole, London, and \*W. Millard, London. Second class, R. M. Hamilton, New Zealand, and W. Quick, London. Third class, T. G. Williams, Liverpool.

\* Obtained marks qualifying for a prize.

## SOCIAL SCIENCE CONGRESS.

THE following "special questions" have been agreed upon between the local committees and the council of the Social Science Association, for discussion in the Congress, to be held in Birmingham in September next:—

*Health.*—1. What is the best method of dealing with (a) town sewage; (b) the products of house and street scavenging; and (c) the products of combustion? 2. What are the best means, legislative or other, of securing those improvements in the dwellings of the poor which are essential to the welfare of the community? 3. How far may the average death-rate of a population be considered an efficient test of its sanitary condition; and by what means can the high death-rate of children be reduced?

*Economy and Trade.*—1. Would it be advantageous to give to leaseholders powers entitling them to the purchase of the fee simple of the lands and premises they occupy, or otherwise to interfere by



law with the prevailing system of building and other long leases? 2. What has been the working of the Employers' Liability Act, 1880, and is any amendment of it desirable? 3. What is the social condition of the working classes in 1884 as compared with 1857, when the first meeting of the National Association for the Promotion of National Science was held in Birmingham; and in what way can the working classes best utilise their savings?

*Art.*—1. Ought elementary instruction in drawing to be made an essential part of the national education? 2. What is the value to the ear, the mind, the health, and the disposition of the young, produced by class instruction in music? 3. How can a love and appreciation of art be best developed among the masses of the people?

### THE CITY OF STOCKHOLM.

THE Grand Governor's office has issued a report on the city of Stockholm for the period between 1876 and 1879, containing various interesting statistics and describing all the changes and improvements that have taken place during that time.

In 1876 the total length of the streets was 38,420 Swedish feet; in 1881 it increased to 389,878 feet, or over 65 English miles. Four hundred thousand kronor, or about 20,000*l.*, were expended yearly for repairing old streets. The result has been that the unsightly and disagreeable cobble paving-stones have nearly disappeared, and been replaced either by cut stones or by macadam and asphalt, which now covers a third of the streets, against a fourth in 1876. The cleaning of the streets is, moreover, greatly facilitated by the changes, and a general improvement in their appearance is already discernible. The water supply has increased considerably since 1876, the pipes having been lengthened from about 42 miles to 56 miles, and two new reservoirs erected in the north of the town, holding respectively 2,500,000 and 2,000,000 Swedish kannor, or 1,450,000 and 1,150,000 gallons.

The drainage has also undergone great improvements. It is not long since all the liquid sewage of the town was carried away by open gutters; the streets became consequently impregnated with impurities, and the air filled with poisonous evaporations during winter months; the gutters moreover froze, and great expense had to be incurred in keeping them free of ice. After the improvements introduced in the Stockholm waterworks, plans have been laid for adopting the self-cleansing system of underground drainage through glazed earthenware pipes. The progress of these works has been considerably slow, as nearly the whole of Stockholm is built upon solid rock; but most of the principal and all the new streets of the town are drained on the new system. Formerly the landlords were responsible for the scavenging of those parts of the streets which were opposite their houses, but this old custom has been entirely done away with in the chief quarters of the town since the formation, in 1876, of a scavenging company, and the cleanliness of the streets has yearly improved.

The town has also been considerably embellished during the quinquennium by improvements in the public squares and gardens. Those especially worthy of notice are the gardens of Humlegården, which now form one of the prettiest and most agreeable quarters of the town. They were formerly used as royal pleasure-gardens, and were not opened to the public until 1820. The grounds then fell into disorder, and became the haunt of low and disreputable people. In 1870 the municipality, after repeated appeals, succeeded in renting the ground from the Crown, and in 1877 they were presented to the city by the king. Since then Humlegården has undergone extraordinary changes, and is now a great ornament to the town, and situated in the centre of the new quarter which has sprung up within the last ten or twelve years. The population of Stockholm has increased from 147,525 in 1876, to 168,019 in 1880. According to the last census of 1882, the population of the whole kingdom amounted to 4,579,115, and of Stockholm to 185,325.

The buildings erected during the period were the two classical schools of Norrmalm and Södermalm in the northern and southern quarters, the Real Läröverk or modern school, and three preparatory schools. The charity schools were also added to with four establishments. The number of private schools amounted to 123, amongst which Palmgren's institution is worthy of notice, where various handicrafts are taught, such as carpentry, turning, bookbinding, &c., in addition to the ordinary subjects of the modern schools.

### THE SWEDISH TIMBER TRADE.

ACCORDING to the annual report of the Saw Mills and Timber Exporting Association of Stockholm, the shipping of timber commenced in the early part of May 1883, and continued in most of the ports uninterruptedly until the middle of November. During that time the condition of the rivers was most favourable for floating purposes, and a larger quantity of timber was exported from Swedish ports than in any previous year. The stock of sawn goods this spring will not, however, exceed that of 1883 to any great extent, as is shown by the following comparative

statement of the stocks ready for exportation in the opening of the shipping season of 1883 and 1884 of the ports north of Stockholm:—

Districts.	Standards.
Gefle . . . . .	54,470
Söderhamn . . . . .	71,283
Hudiksvall . . . . .	28,770
Sundsvall . . . . .	112,000
Härnösand . . . . .	60,000
Örnsköldsvik . . . . .	14,450
Umeå and Nordmaling . . . . .	17,200
Skellefteå . . . . .	17,271
Piteå . . . . .	7,550
Luleå, Kalix, and Haparanda . . . . .	23,500
Total . . . . .	406,494
Against, in 1883 . . . . .	404,704

The quantity of timber, moreover, in the rivers is considerably reduced, and most of the mills will not be able to commence sawing until three weeks after the opening of navigation, which will have the effect of retarding them considerably, and of causing a falling off in the produce of 1884. The total exportation of sawn and planed goods amounted to 748,000 standards, against 715,300 in 1882, and 611,000 in 1881.

A comparison of the stocks of Swedish deals and battens at the London Docks in December 1883, with those of the same date in 1882, shows a decrease of 200,000 deals and 500,000 battens; and in other ports they are not above the average. These facts prove that the Swedish timber trade is on the increase in Great Britain. Prices were, however, on the other hand unfavourable for exporters in Sweden during the past year, showing a falling off of 10*s.* per standard, and a loss of 6,786,500 kronor, about 377,030*l.*, on the exportation of 748,500 standards. The association have, therefore, expressed their opinion that, in view of the diminished supply of timber at the saw-mills, and the increasing consumption abroad, exporters should endeavour to raise the value of their goods during 1884, and thus obtain a reasonable profit on their invested capital. They are recommended—1st, to diminish the felling of trees; 2nd, to avoid pushing the sales and issuing stock notes; 3rd, to make their offers of sale only through one permanently-appointed agent in each country; and 4th, to prohibit the agents circulating printed stock notes indiscriminately to all purchasers. By attending to these rules the association hope to maintain an even quotation of prices, and enter into a confederation with foreign buyers. The new law which has been enacted regarding the barking of all floating timber has been found most prejudicial to the wood industry of Sweden, and the association has taken the initiative in addressing a petition to the king, which has been numerously signed by persons interested in the timber trade.

One of the principal ports in Sweden for timber is Gefle. At the commencement of last year favourable sales of red wood, deals, &c., were there made to France and Spain at about the closing prices of the preceding year, or on a basis of 11*l.* 5*s.* for red 3×9 deals. As the season wore on it became gradually apparent that even stocks as published were less than the actual supply, and the consequence was that an unsatisfactory dragging trade was experienced for Great Britain. English importers bought intermittently throughout the season, and although there were great fluctuations in price, the following may be assumed as a fair average of rates in summer and autumn for good Gefle brands.

PRICES OF SAWN RED WOOD.

	Mixed.	Thirds.	Fourths.	Fifths.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
For 9-inch and upwards deals and boards	10 10 0	8 10 0	6 10 0	5 10 0
For 6½-inch, 7-inch, and 8-inch battens and boards	8 5 0	6 5 0	5 5 0	4 10 0
For 6-inch battens and boards	7 15 0	5 15 0	4 15 0	4 0 0

PRICES OF WHITE WOOD.

	£ s. d.
9-inch and 11-inch deals and boards, unassorted and as falling	5 10 0
6½-inch and 7-inch battens and boards, unassorted and as falling	4 15 0

All per St. Petersburg Standard and free on board.

Up to the present time no business of importance has been transacted for the coming season, as both buyers and sellers are waiting for an improved demand before committing themselves. Steps have, however, been at length taken not only by the leading firms in the Gefle districts, but generally throughout Sweden, to diminish the output, which is clearly far too large for the consumption. This measure has long been seen to be inevitable, and has been taken far too tardily.

The chief industry of Härnösand, consisting of the manufacture and exportation of deals, boards, battens, and other kinds of



wood goods, was unusually active during 1883. The exports amounted to 26,585,754 cubic feet, of the estimated value of 866,052*l.*, but prices were depressed to 15*s.* below those of the preceding year. Sawmill owners have therefore determined to reduce their production to three-fourths of last year's production, in order to prevent the market being overstocked with goods.



#### Design for a Reredos.

SIR,—Your readers will duly appreciate the useful knowledge, so gratuitously imparted to them last week by your correspondent "H. E.," touching the manipulation of plates and the wholesale compilation of architectural scrap-books. As "an experienced paperhanger," he is entitled to be heard on such an important branch of industry; and if he could be induced to furnish a "loan collection" from his "piles of portfolios" to the Architectural Museum, with his own inimitable marginal notes and queries, it is quite possible that the centre of attraction might be temporarily shifted from South Kensington to Tufon Street.

Among his multifarious acquirements, he has learned the Latin for "table," and seems able to discuss the symbolic side of church architecture in a manner sufficiently incomprehensible. In the person of "H. E." we see a neglected genius whom the "trade malice" of Burlington House and the "professional jealousy" of Conduit Street allows—nay, compels—to languish in obscurity. But surely there are still openings for a pushing man. Why does not "H. E." come forward with a word in due season and settle, once and for all, the difference between Messrs. Wood and Fergusson as to the number and dimensions, the disposition and the donors, of the at present unknown number of columns in the Temple of Diana at Ephesus? Or could a more fitting man be found to follow in the wake of Sir Edmund Beckett with a second "sermon" on the west front of St. Albans, due regard being paid to the morals and the manners of the personages from time to time engaged in the general restoration?

It is, however, matter for regret that his facility in the use of the pen is not equal to his handling of the paste-brush. His style is crude and *rather* incoherent—the besetting sin of those who in literature as well as art depend upon paste and scissors as the readiest (sometimes their only) means of earning daily bread.

The author of the "Design for a Reredos" may also think him uncomplimentary and "just two to one"; but he will consider the wanton mutilation of his well-thought-out and elaborate drawing somewhat "depressing" and "a thing to deplore." The designer of the work is no doubt able to defend it; but he is evidently a man of patience, and I hope that his silence will prove him one of long-suffering. For him to notice the "art criticism" of this particular artisan would indeed be *infra dig.* Outsiders like myself will look with suspicion upon this latest and most dubious attempt to invest another man's work with "artistic merit."

Would it not, after all, be better for the "shoemaker to stick to his last"? The ordinary paperhanger is usually an inoffensive and useful enough man in his way. But the extraordinary ones who possess, or are possessed by, "artistic" instincts might keep themselves out of mischief during their leisure hours by devoting their talent to the fabrication of fire-screens and children's scrap-albums, or even the solution of "The Budget Picture Prize Puzzles."

Yours, &c.,  
INCOG.

#### LEGAL.

##### High Court of Justice.—Chancery Division.—June 19.

(Before Mr. JUSTICE KAY.)

ROBERTS v. OPPENHEIM.

OWNERSHIP OF LONDON COURTS.

The plaintiffs in this action claim to be entitled to certain houses in Winkworth Buildings, Austinfriars, and to the freehold of the soil of a court in front of those houses, which court is close to Austinfriars, and approached by steps leading therefrom; and the object of the action is to obtain a declaration of their title to this forecourt and to the areas of the houses in question, to restrain the defendant from trespassing upon the forecourt by building thereon, and to obtain an order for the removal of certain footings, pilasters, and other erections which the defendant had placed upon the forecourt. The defendant, who disputed the plaintiff's title to the forecourt, did not claim any title to it himself, but alleged that it was public property as a public highway, and that he had obtained the license of the Commissioners of Sewers for what he had done, and, moreover, that he had caused no injury or damage to the plaintiffs.

Mr. Justice Kay, after going minutely through the evidence, said it was clearly settled that the mere fact that a court or place

of this kind was a *cul de sac*, and not a thoroughfare, was not enough to negative its being a public highway, if there were other sufficient circumstances to show that it was so. Nor, on the other hand, would it cease to be private property because it was lighted by a public body or patrolled by the police. In this case, however, the evidence clearly showed that it was as much a public highway as if there had been a thoroughfare through it, and in that respect the plaintiffs' case failed. With regard, however, to those houses, the cellars of which went right across the court, the inference was that the soil belonged to the houses to which the cellars belonged, and so far as the defendant had trespassed thereon, the plaintiffs were entitled not merely to damages, but to the removal of the footings and cornices complained of. And so, both sides being to some extent in the wrong, each party must pay his own costs.

##### High Court of Justice.—Queen's Bench Division.

(Before Mr. JUSTICE A. L. SMITH.)

FURNISS v. LANGLANDS.

BUYING LAND.

The plaintiffs in this case are builders, and they sought to recover 100*l.* and interest, overpayment on a sale of land. In 1875 one of the plaintiffs and the defendant had a conversation with regard to land adjoining the property of each party in Epsom, and which it was thought would soon come into the market for sale, and it was suggested that it might be convenient for the parties to buy this land on their joint account. At the end of 1877 the defendant sent his foreman to the plaintiffs to ask if they would like to purchase the land adjoining their property, as he believed it was now for sale, and Mr. George Furniss called on the defendant, and had a conversation with him on the subject. Mr. Langlands said that he would purchase the whole of the land (about an acre and a half in extent), and whatever price he got it at Messrs. Furniss should have the part which they required (about an acre) in the same proportion as he could get the whole for. Mr. Furniss offered to negotiate for the land himself, but the defendant said that the vendors were his landlords, and he knew them so well that it would be better for him to negotiate. A few weeks afterwards Mr. Langlands stated that he had had to give 600*l.* for the land, and that the proportion which, according to arrangement, the plaintiffs would have to give for it was 400*l.* Mr. Furniss complained of the price, but said that he must have the land, although he would be giving more than it was worth. Mr. Langlands suggested that his solicitor should act for all parties, in order to save the plaintiffs some expense, to which they agreed. The plaintiffs shortly afterwards completed their purchase, and paid the 400*l.* to Mr. Langlands, taking a conveyance from him of the land in question, and they thought no more about the matter until the beginning of last year, when they accidentally discovered on purchasing other property that the defendant had not given 600*l.* for the land, as he said, but only 450*l.* They accordingly sued for the return of 100*l.* overpaid together with interest.

The jury found for the plaintiffs, and judgment was given accordingly.

##### Court of Session, Edinburgh.—June 24.

(Before Lord McLAREN.)

GEORGE BEATTIE & SON, &c., v. MACGREGOR.

ARCHITECT'S FEES.

The plaintiffs in this action are architects in Edinburgh, and they claim from the proprietor of the Royal Hotel in that city the sum of 661*l.* as balance of their fees as architects for works connected with additions to and alterations upon the hotel. These works were begun in 1875 and finished in 1880, at a cost of 26,704*l.* Mr. Macgregor engaged the pursuers as architects at a commission of 4 per cent. Their total charge was 1,411*l.*, of which 750*l.* has been paid, and the balance they now sue for. In answer the defendant states that the pursuers made errors in the levels and measurements in the new front to the hotel, by which he was prevented from utilising, as he had proposed, the old floors and ceilings; and that the pursuers granted certificates to tradesmen for payments of instalments on contracts which, when their accounts came to be adjusted, it was found that some of them had been overpaid, and he (defendant) had been unable to recover the sums so overpaid; and that his losses from these sources amount to more than the sum sued for. For this he holds the plaintiffs responsible, and intends to bring an action for the amount.

The Lord Ordinary closed the record, and sisted the case to enable Mr. Macgregor to bring his counter-action.

**Lieutenant Alex. Bleakley**, 1st Cheshire Engineer Volunteers, has been asked to assist Major Rochefort Boyd, R.E., in laying-out the camp for the approaching meeting of the National Rifle Association at Wimbledon. It is understood that this is the first time such an appointment has been offered to a Volunteer officer.



## ARCHÆOLOGY.

**The Shakespearian Epitaph.**—A letter has been discovered from one William Hall, an Oxford student, to Edward Thwaites, the Anglo-Saxon scholar, which dates probably from 1694. It relates to the verses which are inscribed on Shakespeare's tombstone, and is as follows:—"Dear Neddy,—I very greedily embrace this occasion of acquainting you with something which I found at Stratford-upon-Avon. That place I came unto on Thursday night, and the next day went to visit the ashes of the great Shakespear which lye interr'd in that church. The verses which, in his lifetime, he ordered to be cut upon his tombstone, for his monument have others, are those which follow:—"

'Reader, for Jesus's sake forbear  
To dig the dust enclosed here;  
Blessed be he that spares these stones,  
And cursed be he that moves my bones.'

The little learning these verses contain would be a very strong argument of the want of it in the author, did not they carry something in them which stands in need of a comment. There is in this church a place which they call the one-house, a repository for all bones they dig up, which are so many that they would load a great number of waggons. The Poet, being willing to preserve his bones unmoved, lays a curse upon him that moves them, and having to do with clerks and sextons, for the most part a very ignorant sort of people, he descends to the meanest of their capacities, and disrobes himself of that art which none of his contemporaries wore in greater perfection. Nor has the design mist of its effect, for, lest they should not only draw this curse upon themselves, but also entail it upon their posterity, they have laid him full seventeen foot deep, deep enough to secure him. And so much for Stratford, within a mile of which Sir Robinson lives, but it was so late before I knew, that I had not time to make him a visit."

## CHURCH BUILDING AND RESTORATION.

**Aberfoyle, N.B.**—This church has been reopened. It was erected in 1869, from the designs of Mr. Honeyman. It has now been greatly increased in size at the cost of the original donor, Mr. Hampson, and under the direction of the same architect. The addition consists of a transept, and an additional bay at the west end; the old west gable and the south porch having been carefully taken down and re-erected, and there is also a new vestry and heating-chamber, a new pulpit, which is of Caen stone and alabaster, and a new communion table. There is coloured glass in all the windows, but the west window, consisting of three lancets, is particularly worthy of notice. It is the gift of the Hon. William Campbell, and is in memory of ancestors who were natives of the parish. It is the work of Messrs. Alfred O. Hemming & Co., of London. The church is beautifully situated on a large piece of well-wooded ground, given for the purpose by His Grace the Duke of Montrose.

**Bromley Common.**—Holy Trinity Church was reopened and a new apse consecrated by the Archbishop of Canterbury on Monday, 23rd inst., after having been closed during restoration. The old building was erected about forty years ago, and was built on a very awkward plan, having a very shallow chancel, no organ-chamber, and an inadequate heating apparatus. The present additions consist of an apse (which we illustrated in a previous number), giving greater depth to the chancel; an organ-chamber, with space underneath for Grundy's hot-air apparatus; choir stalls, an oak and stone pulpit, &c.; the chancel being raised above the level of the nave floor, and projecting into the body of the church. New seating in pitch pine has been substituted in place of the old straight-backed pews. These improvements were carried out in memory of the late Mr. George Warde-Norman by his family, and a memorial tracery window of four lights, filled with stained glass by Messrs. Clayton & Bell, has been put in by the children of the late Mr. Henry Norman. The total cost of the restoration, including an organ by Mr. Henry Jones, of the Fulham Road, will be under 2,000*l.* Mr. William Smith, of Bromley Common, was the builder employed, under the direction of Mr. C. Pemberton-Leach, 31 Spring Gardens.

## GENERAL.

**Mr. Waterhouse, A.R.A.**, has been appointed architect for the new National Liberal Club, which is to be erected on the Thames Embankment, near Whitehall Gardens.

**Mr. Belt** has been commissioned to execute a bust of the late Sir Michael Costa.

**Mr. Arthur Evans** has been appointed Keeper of the Ashmolean Museum, in place of the late Mr. G. H. Parker, C.B.

**A Design by Messrs. Davis & Emanuel** has been adopted for the new London Almshouses at Brixton. The estimated cost is 8,500*l.* The second prize was awarded to Messrs. Hooker & Hemings.

**The Earl of Carnarvon**, as president of the Society of Antiquaries, and the Countess of Carnarvon, entertained the council and members of the society at an evening party, at their residence in Portman Square, on Wednesday night.

**Chevalier L. Desanges** has been commissioned to paint three whole-length portraits for the Grand Lodge of Freemasons, to replace those that were destroyed by fire last year. These portraits represent the Prince of Wales, the Duke of Manchester, and the Earl of Zetland.

**An Oak Reredos**, designed by Messrs. J. Medland and H. Taylor, of Manchester, has been placed in St. Anne's Church at Brindle Heath, Pendleton.

**The Restoration** of the tower of All Saints' Church, Springfield, has been begun by Mr. J. Brown, builder, of Chelmsford, under the direction of Mr. Fred. Chancellor.

**In the Competition** for the proposed Isle of Man Infirmary and Dispensary the committee have awarded the first premium (40*l.*) to Messrs. Wallace & Fell, of 4 Trafalgar Square, and the second premium (10*l.*) to Messrs. Alex. Bleakley and Thos. W. Cubbon.

**A Site** has been selected on the Thames Embankment for the Burns monument, the gift to the nation of Mr. J. G. Crawford. The spot is in the centre of a semicircular bank of grass picturesquely fringed with trees, and lies in that portion of the river gardens overlooked by the western end of the Adelphi Terrace. The erection of the monument will be at once commenced, and the statue will be unveiled some time in July.

**A Conversazione** will be held at the International Health Exhibition by the Council of the Society of Arts, in conjunction with the Executive Council of the Exhibition, on Wednesday evening, July 9. The whole of the buildings will be open, and the gardens will be illuminated.

**An Appeal** is made for funds to restore St. Michael's, Coventry, under the direction of Mr. J. O. Scott. The estimated cost is 35,000*l.*, towards which an inhabitant of the town has promised 10,000*l.*, on condition that a further sum of 20,000*l.* (payable in five years) be guaranteed within twelve months, and the work be begun at once and be thoroughly carried out.

**The Fountaine Collection** realised 91,112*l.* 17*s.*, the number of lots being 565. The proceeds of the Bernal sale, with 4,098 lots, amounted to 62,690*l.* 18*s.*, and the Strawberry Hill sale, which lasted for twenty-four days, only reached 30,000*l.*

**The Roman Catholic Chapel** at Wellingore Hall, near Lincoln, the seat of Mr. A. H. C. Nevile, was destroyed by fire on Sunday afternoon. The cause of the fire has not been discovered. The loss is estimated at 10,000*l.*

**The City and Guilds of London Institute** has been enriched by the following additional donations to the Equipment Fund of the Central Institution:—The Goldsmiths' Company, 4,000*l.* (subject to confirmation); the Salters' Company, 525*l.*; the Cordwainers', 250*l.* The Plasterers have increased their annual subscription from 50 guineas to 100*l.*

**Mr. Phipps** has prepared the plans for a new circus at Argyll Street, Oxford Street, for Mr. Charles Hengler.

**Portions of a Stone Font** have been discovered in the parish church at Folkestone, built into one of the old walls.

**The Designs of Mr. Alex. Bleakley, A.R.I.B.A.**, of Birkenhead and Westminster, have been selected in competition for the Wadham Road Board Schools, Bootle-cum-Linacre, near Liverpool. The buildings will accommodate 1,200 children in four departments, at a cost of 5*l.* per child. A detached house for the caretaker will also be provided at a cost of 450*l.* The other competitors were "A. B. C.," Thos. Mercer, "Rule of Three," Messrs. H. & A. P. Fry, "Bootle," Thos. Cox, "Ilex," Messrs. F. & G. Holme, "Bootle (Lighthouse)," Jno. E. Reeve, "Omnia Vincit Labor," Owen Roberts, and others.

**Ventilation Open Competition.**—At the ventilation open competition just concluded at Birkenhead, Messrs. Robert Boyle & Son, of 64 Holborn Viaduct, and Glasgow, have been awarded the gold medal, the highest and only prize offered, for their system of ventilation, it being adjudged the best.

**Messrs. Archibald Smith & Stevens**, of Janus Works, Queen's Road, Battersea, have been entrusted with an order for one of Stevens & Major's patent suspended hydraulic passenger-lifts for the Royal Colonial Institute, Northumberland Avenue.

**The Joiners** at Bradford struck work on Monday morning. The men seek to fix the rate of wages paid to men of average skill at 7½*d.* per hour. Several hundred men are out.

**The Master Builders of Bradford** have decided to advance the wages of masons at Bradford to 7½*d.* per hour, thus terminating a strike which has lasted nearly three weeks. Operations have been resumed on several large buildings in course of erection; but as a large proportion of the masons of the town have obtained employment in Lancashire and elsewhere, there was not a general resumption of work.

**The Master Plumbers of New York**, on Monday, locked out 1,200 journeymen in order to compel the Plumbers' Trade Union to recognise the right of employers to control their workmen.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JUNE 28, 1884.

### TENDERS, ETC.

As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

### COMPETITIONS OPEN.

**BURNLEY.**—July 1.—Plans are required for the Erection of Municipal Buildings, Police Courts, and Baths. Premiums of 200, 100, and 50 guineas. Mr. J. E. Stafford C.E., Borough Engineer, Burnley.

### CONTRACTS OPEN.

**BARTON.**—July 1.—For Rebuilding Bridge. Mr. W. Radford, Bridgemaster, 1 Princess Street, Manchester.

**BLAENAVON.**—June 30.—For Building Chapel. Mr. S. Barwell, William Street, Blaenavon.

**BOURNEMOUTH.**—June 28.—For Erection of Sanitary Hospital and Buildings and Works in connection, Iron Fencing, Sewers, &c. Mr. G. R. Andrews, Surveyor, Town Hall Chambers, Bournemouth.

**BRIGHOUSE.**—June 30.—For Building Chapel. Mr. John Judson, Architect, Bogthorn, Kelghley.

**BROMSGHVE.**—July 8.—For Building Infirmary at the Workhouse. Mr. C. A. Edge, Architect, 21 Bennett's Hill, Birmingham.

**EARLSDON.**—June 30.—For Additions to Inn. Mr. T. W. Whitley, Architect, Bank Chambers, High Street, Coventry.

**GREAT YARMOUTH.**—June 30.—For Building Class-room to School. Messrs. Bottle & Olley, Architects, Regent Street, Great Yarmouth.

**HALIFAX.**—July 5.—For Building Residence, Stabling, Coachhouse, &c. Messrs. Horsfall & Williams, Architects, Post-Office Buildings, Halifax.

**HAVERFORDWEST.**—July 9.—For Restoration of North Aisle and North Clerestory of St. Mary's Church. Mr. Ewan Christian, Architect, 8A Whitehall Place.

**HAWICK.**—June 28.—For Building Municipal Buildings. Mr. J. C. Walker, 2 N.E. Circus Place, Edinburgh.

**HOGGESTON.**—June 30.—For New Buildings and Repairs on Mayne's Hill Farm. Mr. J. T. Lawrence, Architect, Bridge Street, Leighton Buzzard.

**MILLOM.**—July 5.—For Building Three Shops and large Hall. Mr. T. B. Lillywhite, Architect, Market Square, Milloom.

**NEWMARKET.**—June 28.—For Building House, Cottage, Meter-house, &c. Mr. John Flatman, Architect, Kingston Villa, Station Road, Newmarket.

**PARK STREET, HERTS.**—July 1.—For Building Bridge. Mr. Urban A. Smith, County Surveyor, Hertford.

**PILING.**—July 2.—For Building Church. Mr. W. Wright, Surveyor, Lancaster.

**PRESTON.**—July 2.—For Building Presbyterian Church. Mr. Joseph Harding, 49 Lane Street, Preston.

**RAYDON.**—June 30.—For Building School. Messrs. T. H. & F. Healy, Architects, Tyrral Street, Bradford.

**SAMTHORPE.**—July 10.—For Building Cemetery Chapel, Mortuary, Lodge, Entrance Gates, and Pallsading. Mr. Robert Clamp, 5 Land of Green Ginger, Hull.

**SAWREY.**—June 30.—For the Erection of Villa Residence. Mr. Eli Cox, Architect, 22A Highgate, Kendal.

**WIGAN.**—July 2.—For Erection of a New Post Office. Mr. A. B. Milford, H.M.'s Office of Works, London.

### TENDERS.

#### BIRMINGHAM.

For Erection of a Pair of Semi-detached Villas, Mayfield Road, Moseley, Birmingham, for Mr. Samuel Mason. Mr. OLIVER ESSEX, A.R.I.B.A., Architect, Birmingham. Quantities by the Architect.

Moffatt . . . . .	£1,390	0	0
Barnsley & Sons . . . . .	1,388	0	0
Hancox . . . . .	1,345	0	0
Horsley Bros. . . . .	1,290	0	0
Robinson . . . . .	1,290	0	0
Bowen . . . . .	1,287	0	0
Woodward . . . . .	1,263	0	0
Bennett . . . . .	1,247	0	0
Williams . . . . .	1,170	0	0
WHITEHOUSE & JONES (accepted) . . . . .	1,163	0	0

#### BRIGHTLINGSEA.

For Construction of Works of Sewerage and Sewage Disposal, Brightlingsea Tending Union. Mr. G. H. SASSER, Thorp-le-Soken, Surveyor.

Chaplin, Brightlingsea . . . . .	£362	10	0
Neave, Stratford . . . . .	340	0	0
Capon, Manningtree . . . . .	315	0	0
Everett & Sons, Colchester . . . . .	300	0	0
Walne, Wimbledon . . . . .	295	0	0
Canham, Weeley . . . . .	291	0	0
GILLINGHAM, Clacton-on-Sea (accepted) . . . . .	287	0	0
Alcock, Colchester . . . . .	285	0	0
Wood, Chelmsford . . . . .	278	0	0
Surveyor's Estimate . . . . .	306	2	6

#### BRENTFORD.

For Laying in the Sewer to the Braemar Road, Brentford, on the Brook House Estate, for Mr. Stephen Walker. Mr. CHARLES J. GLADMAN, A.R.I.B.A., Architect.

Contract No. 2.  
SPICER (accepted).

#### BUCKIE.

For Dwelling-house and Offices, Buckie. Mr. G. A. BRUCE, Architect, Banff.

Accepted Tenders.

Milne, Buckie, mason . . . . .	£620	0	0
Mitchell, Banff, carpenter . . . . .	518	0	0
Barclay, Buckie, slater and plumber . . . . .	175	9	0
Hume & Co., Buckie, plasterer . . . . .	107	7	0

#### DEPTFORD.

For Repairs to the Vestry Hall of St. Nicholas, Deptford. Mr. WILLIAM WALLER, Architect.

Wire, Greenwich . . . . .	£290	0	0
Holloway, New Crossgate . . . . .	181	0	0
Broad, Deptford . . . . .	171	0	0
Robe, Deptford . . . . .	170	0	0
HUBBLE & TROTT, Deptford (accepted) . . . . .	167	0	0

#### DUDLEY.

For Heating St. Augustine's New Church, Dudley. Grundy, London.

For Building Board Schools with Caretaker's House at Netherton, and Enlargement of Infants' School, Dudley. Mr. J. B. MARSH, Architect. Quantities by the Architect.

Netherton.

WOODHALL (accepted) . . . . .	£3,677	10	0
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Wolverhampton Street.

BAIE (accepted) . . . . .	250	0	0
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#### INVERARY.

For Repairing Wooden Wharf, Inverary Pier.

Bain, Bowness . . . . .	£314	0	0
Thomson & Son, Gourrock . . . . .	298	0	0
Black, Kilmichael . . . . .	297	0	0
Melville, Dunoon . . . . .	277	0	0
Munro, Inverary . . . . .	200	0	0

### GLoucester.

For Taking-down and Rebuilding Hospital, Stroud Road, Gloucester. Plans and Quantities by Mr. R. READ, City Surveyor.

Cowley, Cheltenham . . . . .	£562	1	4
Peters, Gloucester . . . . .	557	8	0
Tanner, Gloucester . . . . .	516	0	5
Fream, Gloucester . . . . .	464	0	0
Wingate & Sons, Gloucester . . . . .	463	1	3
Teague, Gloucester . . . . .	438	19	1
Meredith, Gloucester . . . . .	431	19	9
CLUTTERBUCK, Gloucester (accepted) . . . . .	413	0	0

### LONDON.

For Heating Belsize Court, Hampstead, N.W. Bacon & Co.

For Heating St. Andrew's New Church, Stoke Newington. Grundy, London.

For Heating St. Katherine's New Church, Rotherhithe. Grundy, London.

For Works at 259 Marylebone Road. Mr. R. REID, Surveyor.

Colwill . . . . .	£37	10	0
Clark & Mannoch . . . . .	23	10	0

For Alterations to Wilton Square Welsh Chapel. Mr. F. BOREHAM, Architect.

Dove Brothers . . . . .	£2,765	0	0
Williams & Son . . . . .	2,655	0	0
Grover . . . . .	2,481	0	0

For Reinstating Nos. 5, 6, and 7 Ivy Lane, E.C., for Messrs. Smith Brothers. Mr. WIMBLE, Architect.

Smith & Sons . . . . .	£2,153	0	0
Falkner . . . . .	2,125	0	0
Scrivener & Co. . . . .	2,107	0	0
Lawrence & Son . . . . .	2,085	0	0
Morter . . . . .	2,077	0	0
Croaker . . . . .	1,990	0	0

For Alterations at the White Bear Public-house, Kennington Park Road, S.E., for Mr. Bannell. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

Royal . . . . .	£1,146	0	0
Canning & Mulling . . . . .	1,017	0	0
Godden . . . . .	953	0	0
Cook . . . . .	897	0	0
Walker . . . . .	841	0	0
BURMAN (accepted) . . . . .	733	0	0

For Erection of New School Buildings and Alterations to Wellington Road Baptist Chapel, Stoke Newington. Mr. HAMPTDEN W. PRATT, Architect, 6 Duke Street, Adelphi, W.C. Quantities by Messrs. Evans & Deacon, 1 Adelaide Street, Charing Cross, W.C.

Outhwaite & Son, London . . . . .	£1,770	0	0
L. H. & R. Roberts, London . . . . .	1,680	0	0
Higgs & Hill, London . . . . .	1,680	0	0
Chessum, London . . . . .	1,572	0	0
Page, Croydon . . . . .	1,505	0	0
Garrud, London . . . . .	1,473	0	0
Wilson & Exton, London . . . . .	1,461	0	0
Triggs, London . . . . .	1,294	0	0

For Building Cullum House, No. 34 Lime Street, E.C. Messrs. N. S. JOSEPH & PEARSON, Architects. Mr. S. B. WILSON, Surveyor.

Corder . . . . .	9,678	0	0
Williams . . . . .	9,473	0	0
Bywaters . . . . .	9,233	0	0
Lawrance . . . . .	9,230	0	0
Pitchard . . . . .	9,180	0	0
Patman & Fotheringham . . . . .	9,173	0	0
Colls & Son . . . . .	9,140	0	0
Ashby Bros. . . . .	8,983	0	0
Brass . . . . .	8,981	0	0
Hall, Beddall & Co. . . . .	8,789	0	0
Patrick . . . . .	8,758	0	0
Scrivener . . . . .	8,574	0	0
Ashby & Horner . . . . .	8,540	0	0

For Construction of 540 feet of 15-inch Pipe Sewer and 1,170 feet of 12-inch Pipe Sewer, Newlands Estate, Peckham Rye.

	A	B
Neave, Stratford . . . . .	£680	0
Wilkes & Co., Devonshire Square . . . . .	671	7
Saunders, Fulham . . . . .	664	13
Hare, Clapham . . . . .	634	15
Dearle, Eastbourne . . . . .	567	12
Carter, Anerley . . . . .	566	0

HARRIS, Camberwell (accepted) . . . . . 545 0 0 585 0 0

A—Stuart Road, Sartor Road, Pancras Road, and Marylebone Road, on the Newlands Estate, Peckham Rye.  
B—At Waterloo Street, &c., Camberwell Green.



## LONDON—continued.

For Rebuilding Promises, Queen's Road, Bayswater, for  
Mr. W. Whiteley. Mr. J. EBENEZER SAUNDERS,  
Architect. Mr. R. OSBORN, Surveyor.

	£	s	d	Time.
Colls & Sons	£69,643	0	0	9 months
Nightingale	68,430	0	0	8 "
Corder	67,092	0	0	9 "
Patman & Fotheringham	66,860	0	0	10 "
McGregor	66,682	0	0	8 "
Ashby & Horner	66,255	0	6	8 "
Holland & Hannen	65,380	0	0	5 "
Brass	64,993	0	0	4 "
Sheppard	59,710	0	0	6 "

For Painting, Repairs, &c., to Board Schools.

	£	s	d
Cox	£97	15	0
Deering & Son	126	0	0
Pritchard	91	0	0
McCormick & Son	76	10	0

## Gainsborough Road.

Robey	134	16	8
Vigor & Co.	126	0	0
Flaxman	120	0	0

## Mantua Street.

Hammond	374	10	0
Rice	332	0	0
Nightingale	330	0	0
Horton	308	0	0

## Sydenham Hill.

Stanley & Sons	250	0	0
Jerrard	123	0	0
Hammond	97	10	0
Garrett	58	10	0

## Barnet Street.

Knight & Walden	94	0	0
Flaxman	93	0	0
Sargeant	90	0	0

## Hammond Square.

Smith & Son	454	0	0
Grover	444	0	0
McCormick & Son	438	10	0
Pritchard	364	0	0

## Keeton's Road.

Derby	170	0	0
Shepherd	158	0	0
Nightingale	95	0	0
Higgs & Hill	94	0	0

## Bonner Street, Stoke Newington.

Shurmur	252	0	0
Robey	245	0	0
Sargeant	204	10	0

## High Street, Stoke Newington.

Snewin Bros. & Co.	71	0	0
Shurmur	69	10	0
McCormick & Son	65	0	0

## Orchard Street.

Snewin Bros. & Co.	99	0	0
Steel Bros.	93	8	0
Willmott	88	0	0

## Wolverley Street.

Willmott	365	0	0
Smith & Son	339	0	0
Goodman	325	0	6
Pritchard	246	0	0

## Fairfield Road.

Atherton & Latta	81	5	0
F. & F. J. Wood	78	0	0
Shurmur	72	0	0
Robey	71	10	0

## Penrose Street.

Mallett	187	0	0
Ash	136	0	0
Knight & Walden	119	0	0
Della Rocco	96	10	0

## Albany Row.

Rice	110	0	0
Ash	108	0	0
Pearce	91	0	0

## Flint Street.

Della Rocco	111	0	0
Ash	104	0	0
Horton	80	10	0

## Old Ford.

F. & F. J. Wood, painting	373	0	0
F. & F. J. Wood, partitions	52	0	0

## Winchester Street.

Knight & Walden	535	0	0
Williams & Sons	487	0	0
Goodman	435	0	0
Green	390	0	0

## Blackheath.

Pitchford	118	0	0
Jerrard	94	0	0
Holting & Son	85	5	0
Davis	65	17	0

## Cayley Street.

Thompson & Tweed	208	0	0
F. & F. J. Wood	96	10	0
Atherton & Latta	96	0	0
Derby	83	0	0
Howard	77	10	0

## Bowling Green Lane.

Kirby & Chase	387	0	0
Catchpole	260	0	0
McCormick & Son	247	10	0
Grover	194	0	0

## Settles Street.

Hobson	388	0	0
Cox	355	0	0
Willmott	341	0	0
Coombe	267	0	0

## Queen's Gardens.

Oldrey	100	0	0
Pardoe & Sons	86	0	0
Hobson	73	0	0
Stimpson & Co.	64	0	0

## LONDON—continued.

For Painting, Repairs, &c., to Board Schools.

	£	s	d
Lathey Bros.	345	0	0
Oldrey	330	0	0

## Waterloo Street.

	£	s	d
Pitchford	122	10	0
Ash	85	10	0
Holding & Son	83	5	0
Davis	66	12	0
Johnson	63	10	0

## Northey Street.

Thompson & Tweed	357	0	0
Vigor & Co.	246	6	0
Coombe	237	0	0
Derby	187	0	0
Lima	175	0	0

## Poole's Park.

Kirby & Chase	212	0	0
Williams & Son	128	0	0
Goodman	98	0	0
Stevens	63	10	0

## Baker Street.

Vigor & Co.	85	1	6
Howard	62	0	0

## Neckinger Road.

Tait & Co	89	0	0
Higgs & Hill	85	0	0

## Albion Street.

Jerrard	109	0	0
Coombe	81	0	0
Derby	71	0	0

## Jessop Road.

Mallett	135	0	0
Sturgeon	104	0	0
Bashman	95	0	0
Higgs	85	0	0
Pearce	79	0	0

## Charles Street, Horselydown.

Shepherd	150	0	0
Davis Bros.	88	0	0
Higgs & Hill	79	0	0
Hornett	65	0	0

## Alexis Street.

Mallett	165	0	0
Higgs	100	0	0
Smith & Son	98	0	0

## Winstanley Street.

Della Rocco	142	0	0
Lathey Bros.	137	0	0
Rice	121	0	0
Horton	81	13	0

## Camden Street.

Kirby & Chase	515	0	0
Oldrey	352	0	0
Petchey	339	0	0
Catchpole	322	0	0
Williams & Son	320	0	0

## Shap Street.

Cox	89	0	0
Sargeant	85	10	0
Pritchard	68	15	0

## Thomas Street.

Willmott	106	0	0
Reed	95	0	0
Calvin	77	10	0
Snewin Bros. & Co.	76	0	0

## Layall Street.

Barrie Bros.	79	0	0
Grover	68	0	0
Green	63	0	0
Wontner, Smith & Son	61	0	0

## Drury Lane.

Hobson	139	0	0
Hornett	107	2	0
Davis Bros.	84	0	0

## Creed Place.

Hersee	132	0	0
Pitchford	127	16	0
Jerrard	122	0	0
Holding & Son	99	0	0
Johnson	69	10	0

## Portobello Road.

Pardoe & Sons	425	0	0
Stimpson & Co.	416	0	0
Petchey	341	0	0
Oldrey	319	0	0

## Galleywall Road.

Jerrard	143	0	0
Shepherd	95	0	0

Mr. T. L. Green writes:—"In your next issue please correct the error respecting the Tenders for the Ten Shop-fronts around the Central Fish Market, as my Tender should have been £997 instead of £797, and was at once withdrawn."

## MANCHESTER.

For Erection of New Premises, Deansgate, Manchester, for Mr. James Woodall. Messrs ANDREWS & TIMMAS, Architects, Manchester.

Warburton	£13,983	0	0
Parkinson	12,579	0	0
Carlyle	12,503	0	0
T. & W. Meadows	12,335	0	0
McFarlane	12,290	0	0
Wilson, Toft & Huntley	12,238	0	0
Holt	11,912	0	0
Neill & Sons	11,745	0	0
Brown	11,678	0	0
SOUTHERN & SONS (accepted)	11,480	0	0

## MARKET RASEN.

For Restoring Church Tower, Market Rasen. Mr. C. KIRK, Architect, Stenford.

Walter & Hensman, Horncastle	£395	0	0
Medway, Stenford	335	0	0
Kendall, Market Rasen	325	0	0

## NEWARK.

For Building House and Boundary Walls for the Newark Gas Company. Mr. GEO. SHEPPARD, Architect.

Smith & Lunn	£2642	0	0
Cosham	638	0	0
Duke	570	0	0
Brown & Son	554	0	0
White	539	0	0
Coombes	510	0	0
CROSSLAND (accepted)	500	0	0

For the Supply of Fittings, &c., for the Covered Market Hall, Newark. Mr. GEO. SHEPPARD, Architect.

Duke	£335	0	0
Bryan & Cooke	314	0	0
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Henderson	257	0	0
Henderson (amended tender)	272	0	0

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## Contract No. 2.

GIBSON, Southall (accepted).

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## Contract No. 3.

BRUNSDEN & Co, Brentford (accepted).

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Harwood, Longfleet	75	0	0
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## ROTHERHAM.

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H. Wake, Rotherham	233	8	4
Hill, Rotherham	215	10	0
Pugh, Rawmarsh	208	10	0

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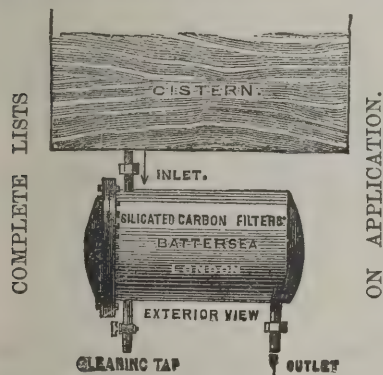
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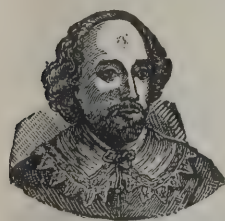
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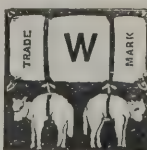
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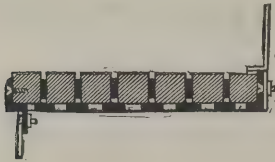
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## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

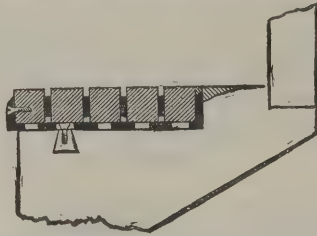
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No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.



In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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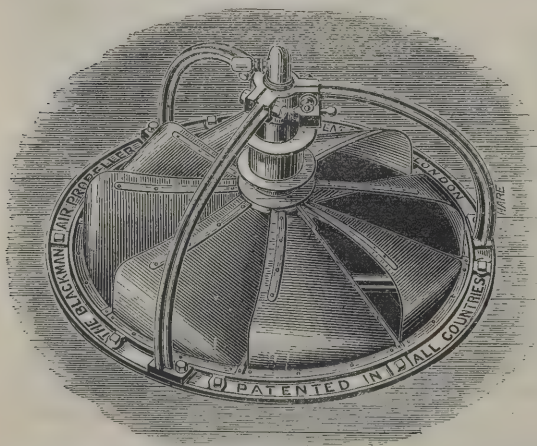
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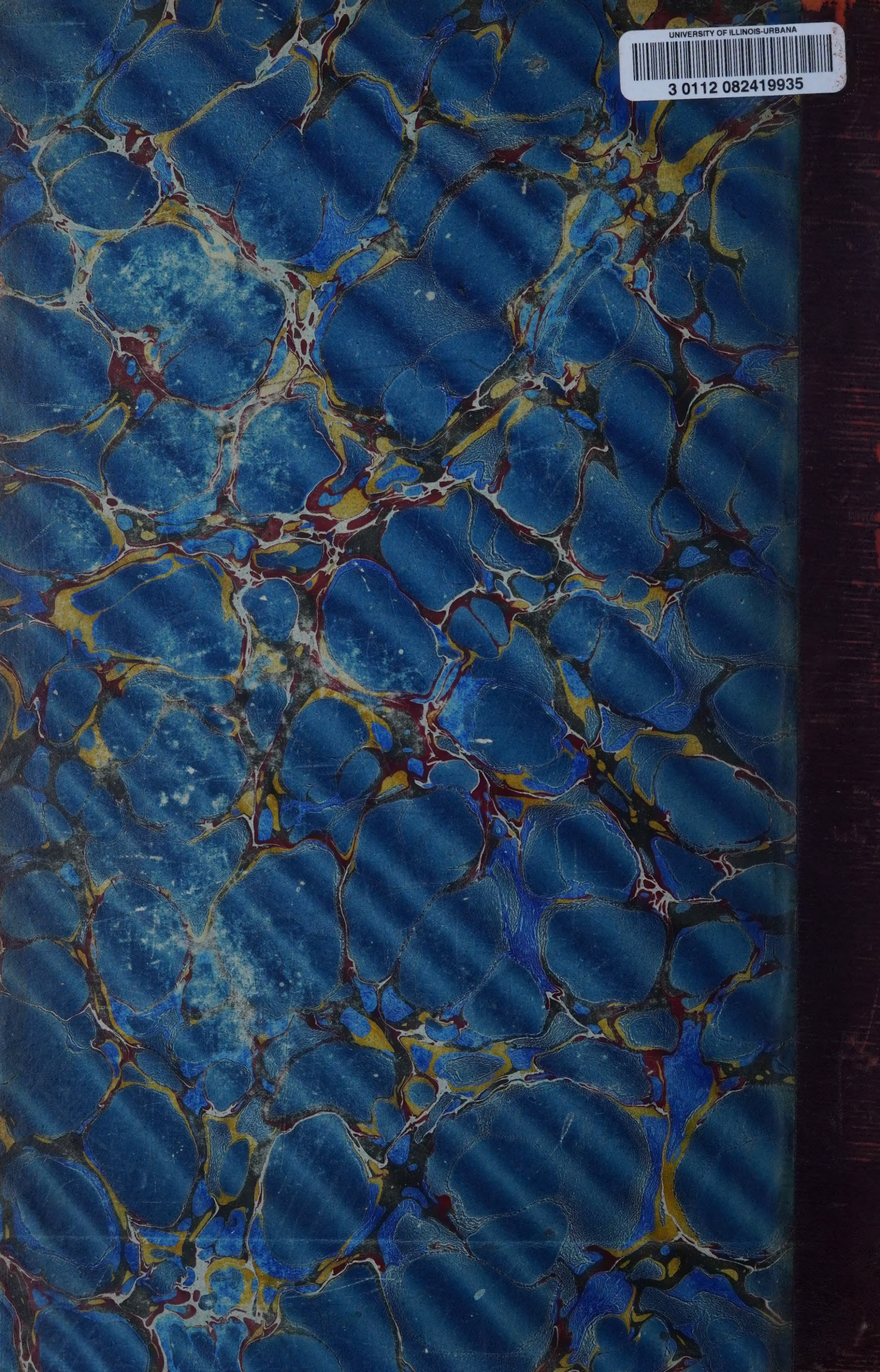












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